

UNION COUNTY BOARD OF EDUCATION CONTRACT ROUTING SHEET

Contractor Name: BAR Roofing and Maintenance
 Address: 1313 S Park Drive
 City, State, Zip: Kernersville, NC 27284
 Contact Name: Jason Darrah
 Telephone Number: 336.391.1670

UCPS Contract Number: 4-97336031

Purpose of Contract (location and brief description): Monroe High School-Roof Renovation

Submitting Department: Facilities Department

Date Submitted: 03.29.2024

Budget Account Number: _____

Funding Source: CIP

Contract Amount: \$ 570,000

Contract Period: Completion within 90 consecutive calendar days

UCPS Employee to Contact: Penny Helms/Catherine Brown

Phone Number: 704-296-3160

NOTE: Individuals listed below should initial, date, and forward this form after completing their responsibilities relating to this Contract.

**1. Approved by Fund Owner/Acquire Vendor Signature and proper
Insurance Certificate with UCBOE NAMED as
CERTIFICATE HOLDER.**

A. Insurance Certificate Reviewed/Approved by Risk Management

2. Approved by Appropriate Representative(s) of UCPS:

- UCPS Project Coordinator
- UCPS Department Head/School Principal
- Asst. Supt. for Administration & Operations
- Asst. Supt. for Human Resources
- Asst. Supt. for Instructional Programs Asst.
- Asst. Supt. of Student Support
- Chief School Performance Officer
- Chief Technology Officer

INITIAL

DATE

^{DS}
SH

4/18/2024 | 11:55 AM

^{DS}
MB

4/15/2024 | 8:33 AM

^{DS}
CM

4/19/2024 | 5:13 PM

^{DS}
SS

FORWARD TO UCPS GENERAL COUNSEL OFFICE

3. Approved by Legal Counsel

^{DS}
KB

^{DS}
MM

FORWARD TO SUPERINTENDENT/BOARD OF EDUCATION

4. Approved by Superintendent/Board of Education

FORWARD TO FINANCE

6. Pre-audited by Representative of Finance Officer

^{DS}
SM

4/22/2024 | 2:01 PM

**UNION COUNTY PUBLIC SCHOOLS
MONROE HIGH SCHOOL
ROOF RENOVATION
(CONTRACT NUMBER 4-97336031)**

This Contract is made and entered into this 12th day of March 2024 between The Union County Board of Education ("UCBOE") located at 400 North Church Street, Monroe, North Carolina 28112 and BAR Roofing and Maintenance ("Contractor") located at 1313 S. Park Drive, Kernersville, North Carolina 27284.

For and in consideration of the mutual promises set forth in this Contract, the parties do mutually agree as follows:

1. Obligations of Contractor - The Contractor agrees to provide all services as required to fully, timely and properly complete Monroe High School Roof Renovation Project (the "Project") in accordance with, and as more particularly described, as Base Bid Option# 2 in the Project Manual dated October 2023, Addendum 1, Addendum 2, and Addendum 3 which is incorporated herein by reference (the "Services"). The Project Manual includes the drawings and specifications.

The Contractor agrees to coordinate its Services with the work of any other separate contractors or with the work of the UCBOE's own forces to avoid delaying or interfering with their work. The Contractor further agrees to inform the UCBOE on a regular basis or at the UCBOE's request of the progress of the Services.

Unless otherwise provided, the Contractor shall secure and pay for all permits, licenses, or inspections necessary for the proper execution and completion of the Services; shall comply with all laws, ordinances, or regulations bearing on the performance of the Services; shall enforce good order and discipline among his employees and subcontractors on the Project; and shall keep the Project reasonably free from waste materials or rubbish resulting from the Contractor's operations.

The Contractor warrants that the Contractor has visited the location of the Project and is familiar with all field conditions bearing upon the Contractor's performance of the Services; that the materials and equipment furnished under the Contract are of good quality and new (unless otherwise permitted); that the Services meets or exceeds the standards ordinarily observed in the industry; and that the Services conforms to the requirements of the Contract and to all applicable codes, ordinances, laws, or regulations. The Contractor further warrants and promises that the Services shall be free from defects and nonconformities in materials and workmanship for a period of two years from the later of the Date of Completion or such date as the Contractor actually completes all the Services. During such period the Contractor will remedy at Contractor's expense nonconformities or defects in the Services within a reasonable time after receiving notice thereof from UCBOE.

In addition to the indemnification obligations contained in the attached terms and conditions to this Contract, the Contractor further agrees to defend and indemnify the UCBOE from and against all claims, damages, losses, and expenses, including reasonable attorneys' fees, arising out of the Contractor's failure to pay subcontractors or materials suppliers.

The Contractor agrees that the UCBOE may order changes in the general scope of the Services, including additions, deletions, and similar revisions. The parties agree to adjust the Contract Price and Date of Completion to reflect the effects of such changes, which adjustments shall be authorized only upon execution of a written change order (a "Change Order"). In case of emergency or extenuating circumstances or if a construction contingency is provided as stated below, approval of changes may be obtained verbally by telephone or field orders approved by all parties, then shall be substantiated in writing as outlined under normal procedures.

The UCBOE may issue written Change Orders to the Contractor directing a change in the Services. The amount of any increase or decrease in the Contract Price shall be by mutual acceptance of a total amount supported by sufficient data and information to substantiate the change. If the UCBOE and Contractor do not mutually agree on the amount of the change in the Contract Price, the Contractor will proceed with the Services described in the Change Order and the UCBOE will pay the reasonable costs of any additional work, including a reasonable amount for the Contractor's overhead and profit. Any decrease in Contract Price for a decrease in the Services will be the reasonable costs of the Services deleted, including a reasonable amount for the decrease in the Contractor's overhead.

Asbestos may or may not be present at the project site. In accordance with the Asbestos Hazard Emergency Response Act (AHERA) the UCBOE has had an Asbestos Management Plan (AMP) prepared for this site. A copy of the AMP is available at the UCPS Facilities Department or at the project site. The AMP is designed to document (to the best of the UCBOE's ability) the asbestos containing building materials (ACBM) or presumed asbestos containing materials (PACM) present at the project site. It is incumbent upon the Contractor to review the AMP to insure his/her staff does not come in contact or otherwise disturb the ACBM/PACM. The Contractor is to notify all their subcontractors and other staff involved with the project of the AMP so they may also avoid being exposed to and /or disturbing any ACBM/PACM during construction. It shall be understood that by executing an agreement between the UCBOE and Contractor that the Contractor has made this review and has notified all staff involved with this project of the availability of the AMP.

The UCBOE and Contractor recognize that time is of the essence to this Agreement and that the UCBOE will suffer financial loss if the work is not completed within the times specified herein. Both parties also recognize the delays, difficulties and expense involved in proving, in a legal or arbitration proceeding, the actual loss suffered by the UCBOE if the Work is not completed on time. Accordingly, in lieu of requiring such proof, the UCBOE and Contractor agree that as liquidated damages for delay (but not as a penalty) the Contractor shall pay to the UCBOE for each day in excess of the term allowed for completion of the Work, the Contractor shall pay to the UCBOE the sum of \$500.00 as liquidated damages.

Contractor shall for the duration of this Contract maintain and pay for insurance through insurers approved by the UCBOE having provisions for the following coverages:

Workman's Compensation and Employers Liability Insurance in the Contractor's name with limits of liability under the Employers Liability portion of not less than \$1,000,000.00, containing a waiver of subrogation in favor of the UCBOE executed by the insurance carrier

Public Liability Insurance including Contractual Liability Insurance in the Contractor's name, with bodily injury limits of not less than \$1,000,000.00 for each occurrence and Property Damage Insurance with a minimum of \$500,000.00 for each occurrence.

The Contractor shall take out and maintain such insurance as will indemnify and save the UCBOE harmless from any and all claims made by any person or persons for damage for personal injury-including death-and property damage which may arise from the Contractor's operations on the premises of the UCBOE whether such operations are by the Contractor, any sub-contractor or anyone directly indirectly employed by either of them.

Automobile Liability Insurance with an Employer's Non-Ownership Liability Endorsement in the Contractor's name covering all owned, non-owned, and hired vehicles. Limits of liability shall not be less than \$1,000,000.00 for each accident for bodily injury and property damage.

Builders Risk or Installation Floater covering fire, vandalism, malicious mischief, and extended coverage perils in amounts sufficient to cover the value of the work installed and the building materials stored at the Construction Site.

Before commencing any Work, the Contractor shall forward to the UCBOE two copies of a Certificate of Insurance issued by the Insurance Carrier, not the local agent or representative, indicating that all required insurance is in force. The Certificate shall state the policy number, date of expiration, and limits of liability, and contain a provision that the insurance will not be cancelled, changed or allowed to lapse prior to ten days after written notice to such cancellation or intention to allow lapse has been forwarded by Registered Mail to the UCBOE. The Contractor shall list Union County Board of Education as additional insured. The Contractor must certify that he has obtained similar certificates or evidence of insurance from each of his sub-contractors before work commences. Each sub-contractor must be covered by insurance of the same type and in the same amounts as the Contractor unless the Contractor and the UCBOE agree that a reduced coverage is adequate because of the nature of the particular sub-contract work. The Certificate of Insurance must be received within 48 hours of request by UCBOE.

The term of this contract: Work to be performed under this Agreement shall commence upon receipt of Notice to Proceed issued by UCBOE, and shall be pursued continuously until completed. Contractor shall endeavor to accomplish its substantial completion by 90 calendar days from start date. The date of substantial completion of the work or designated portion thereof shall be that date when the Work is sufficiently complete that the UCBOE can utilize the work or any designated portion thereof for the use for which it is intended. The guarantee and warranty period shall begin on the date of final acceptance of the roofing assemblies by the UCBOE (the "Date of Completion"). The Contractor agrees to perform the Services in a timely, complete, and professional manner and in accordance with the terms and conditions of this Contract.

This contract does not grant the Contractor the right or the exclusive right to provide specified services to UCBOE. Similar services may be obtained from sources other than the Contractor (or not at all) at the discretion of the UCBOE.

The Contractor represents and warrants that (i) it is duly qualified and licensed to provide the Services, (ii) it will provide the Services in a manner consistent with the level of care and skill ordinarily exercised by contractors providing similar services under similar conditions, (iii) it possesses sufficient experience, personnel, and resources to complete the Services, (iv) it shall perform the Services in compliance with applicable laws, statutes, ordinances, codes, orders, rules and regulations, and (v) its reports, if any, shall be complete, accurate, and unambiguous.

2. Obligations of UCBOE. UCBOE agrees to pay the Contractor for services as follows:

(i) Base Bid Option #2 (Modified Bitumen Re-roof) \$ 570,000.00

ALL INCLUSIVE TOTAL \$ 570,000.00

Amount Includes Allowance Funds in the amount of \$25,000.00

Unit Prices:

Fire Treated Wood Blocking & Installation 8.50 per bd. ft.

3. Project Coordinator. Maurice Brown is designated as the Project Coordinator for the UCBOE. The Project Coordinator shall be the UCBOE's representative in connection with the Contractor's performance under this Contract. The UCBOE has complete discretion in replacing the Project Coordinator with another person of its choosing.
4. Contractor Supervisor. Jason Darrah is designated as the Contractor Supervisor for the Contractor. The Contractor Supervisor is fully authorized to act on behalf of the Contractor in connection with this Contract. Substitution of Contract Supervisor must be presented to Project Coordinator with a minimum of 24 hour notice and shall include contact information of the newly selected Contractor Supervisor.
5. Terms and Methods of Payment. UCBOE will make payment after pay applications are approved on a net 30 day basis. Failure to submit all required documents will delay payment. UCBOE will not pay for services or materials in advance without the prior approval of the Finance Officer. Contractor shall submit applications for payment to Nelson Hall & Associates, Inc. by the twenty fifth (25) date of the month. The application for payment shall be in the amount of ninety-five (95%) percent of the value of work installed by Contractor and approved by UCBOE until project is fifty (50%) percent complete. The UCBOE will pay for materials stored on the site only if agreed to prior to shipment of the materials. Otherwise, payment will be made for materials in place and work complete as verified by observation reports and the roof observer. Waivers of Lien from material suppliers shall be submitted commencing with the second request for payment. No requests for payment (after the first request) will be processed without appropriate Waivers of Lien attached to the payment request. All pay requests must be signed by the onsite roof observer (if applicable) prior to submission, contain the MBE Documentation for Contract Payments, Subcontractor Information for Contract Payments, Sales Tax Certification Form. Request for final payment must be accompanied by the warranty letter from the Contractor stating that all punch list items have been completed, lead and asbestos free certification and lien waivers from the Contractor and material suppliers.
6. Additional Provisions. Contractor agrees to the Standard Terms and Conditions set forth as Attachment A attached hereto and incorporated herein by reference.
7. Counterpart Execution. This Contract may be executed and recorded in two or more counterparts, each of which shall be deemed an original and all of which, when taken together, shall constitute one and the same instrument. Each party shall be entitled to rely upon executed copies of this Contract transmitted by facsimile or electronic "PDF" to the same and full extent as the originals.

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[SIGNATURES ON NEXT PAGE]

IN WITNESS WHEREOF, UCBOE and Contractor have executed this Contract on the day and year first written above.

BAR Roofing and Maintenance

Contractor Name
 DocuSigned by:
 Jason Darrah 4/22/2024 | 7:33 AM EDT
 Signature of Authorized Representative Date
 Jason Darrah Owner
 Printed Name Title
 45-2558622
 Contractor's Federal Identification #
 [if Contract is with Organization or Social Security Number if individual]

THE UNION COUNTY BOARD OF EDUCATION

DocuSigned by:
 Kathy Heintel 4/22/2024 | 7:10 PM EDT
 Board Chairperson Date

This instrument has been pre-audited. in the manner required by the School Budget and Fiscal Control Act.

DocuSigned by:
 Shanna McLamb 4/22/2024 | 2:01 PM PDT
 Finance Office Date

APPROVED AS TO FORM:

DocuSigned by:
 Michele Morris 4/22/2024 | 6:09 AM PDT
 School Board Attorney Date

REVIEWED BY:

DocuSigned by:
 Sara Hymel 4/18/2024 | 11:55 AM EDT
 Division of Insurance and Risk Management Date

Attachment A

Standard Terms and Conditions

I. Standard Terms and Conditions for All Contracts

1. Defined Terms, "Contract" means the agreement between UCBOE and Vendor which consists of the applicable Contract Documents. "Contract Documents" means: (i) any applicable purchase order between Vendor and UCBOE specifically including all terms and conditions set forth or referenced herein and on the face of a Purchase Order, (ii) any attachments hereto, (iii) any applicable solicitation documentation related to hereto (including without limitation any request for proposals or invitation for bids and Vendor's response thereto), and (iv) any other terms and conditions of a written agreement signed by Vendor and UCBOE that deals with the same subject matter. "Goods" means any supplies, materials, products or other tangible personal property provided by Vendor to UCBOE. "Purchase Order" mean any applicable purchase order issued by UCBOE. "Services" means services, specifically including without limitation construction services, design services, professional or consulting services and software as a service, "UCBOE" means the Union County Board of Education. "Vendor" means the party contracting with UCBOE and includes individual and entities that may be referred to in Contract Documents as "vendor", "seller", "service provider", or "contractor".
2. Written Agreement Signed by Both Parties; Acceptance of Purchase Order Terms and Conditions when there is not a Separate Written Agreement Signed by Both Parties. When a Contract is signed by both UCBOE and Vendor then the Purchase Order issued by UCBOE is for administrative convenience and is not part of the Contract Documents. When there is not a separate Contract signed by both UCBOE and Vendor, then Vendor's acknowledgment of the terms of any Purchase Order, without timely objection, or Vendor's shipment or performance of any part of a Purchase Order, constitutes an agreement to all terms and conditions set forth or referenced herein and on the face of the Purchase Order, together with the terms and conditions of any other applicable Contract Documents. The terms and provisions set forth in the Contract Documents shall constitute the entire agreement between Vendor and UCBOE with respect to the purchase by UCBOE of the Services and/or Goods work performed as described in the Contract Documents. In the event of any conflict between any terms and conditions of the Contract Documents, the terms and conditions most favorable to UCBOE shall control. A Purchase Order constitutes an offer by UCBOE and expressly limits acceptance to the terms and conditions stated therein. No additional or supplemental provision or provisions in variance herewith that may appear in Vendor's quotation, acknowledgment, invoice, or in any other communication from Vendor to UCBOE shall be deemed accepted by or binding on UCBOE. UCBOE hereby expressly rejects all such provisions which supplement, modify or otherwise vary from the terms of the Contract Documents, and such provisions are superseded by the terms and conditions stated in the Contract Documents, unless and until UCBOE's authorized representatives expressly assent, in writing, to such provisions. Stenographic and clerical errors and omissions by UCBOE are subject to correction.
3. Cancellation of Purchase Order. UCPS may cancel any Purchase Order or portion thereof without liability, if:
(a) Vendor fails upon request to give reasonable assurance of timely performance or UCPS otherwise determines that it has reasonable grounds for insecurity regarding Vendor's performance; (b) conforming Goods or Services (including the quantities specified for delivery) are not delivered within the time specified or, if no time is specified, within a commercially reasonable time; (c) Vendor otherwise breaches the Contract and such breach is not corrected within thirty (30) days following written notice of breach; or (d) cancellation is otherwise required or allowed by law.
4. Quantities. Shipments must equal exact amounts ordered unless otherwise agreed in writing by UCBOE. The award of a term contract neither implies nor guarantees any minimum or maximum purchases. Materials received in excess of quantity specified on the purchase order, at UCBOE option's, may be returned at the Vendor's expense.
5. Prices. If Vendor's price or the regular market price of any of the Goods covered hereunder is lower than the price stated in the Contract Documents on the date of shipment of such Goods, Vendor agrees to give UCBOE the benefit of such lower price on any such Goods. In no event shall Vendor's price be higher than the price last quoted or last charged to UCBOE unless otherwise agreed in writing. No charges for transportation, boxing, crating, etc. are allowable unless such charges are included in the Contract Documents.
6. Invoices. It is understood and agreed that orders will be shipped at the established Contract prices in effect on dates orders are placed. Invoicing at variance with this provision may subject the Contract to cancellation.

Applicable North Carolina sales tax shall be invoiced as a separate item. Invoices shall be sent to UCBOE's accounts payable department with a copy to UCBOE Project Coordinator.

7. Freight on Board. All shipments of Goods are FOB destination unless otherwise stated in the Contract Documents. Any freight charges prepaid by Vendor are to be itemized on the invoice unless stated otherwise in writing by form of quote, bid, contract. In instances where Goods are shipped against this order by parties other than those specified on the Purchase Order, the third-party shipper must be instructed to list the UCBOE purchase order number on all packages, bills of lading, etc. to insure prompt identification of order.
8. Taxes. Taxes are included in the Contract Price. Applicable taxes shall be invoiced as a separate item for UCBOE's records.
9. Payment Terms. Payment terms are Net 30 days after receipt of correct invoice or acceptance of Goods, whichever is later.
10. Condition and Packaging. Unless otherwise provided by special terms and conditions or specifications, it is understood and agreed that any item offered or shipped has not been sold or used for any purpose and shall be in first class condition. All containers/packaging shall be suitable for handling, storage or shipment.
11. Safety Data Sheets. Safety Data Sheets must be provided with shipment of all chemicals."
12. Delays in Shipment. Time and date of delivery are of the essence, except when delay is due to causes beyond Vendor's reasonable control and without Vendor's fault or negligence.
13. Risk of Loss. Vendor shall have the risk of loss of and damage to the Goods subject to the Contract Documents until such Goods are delivered to the destination and accepted by UCBOE or its nominee.
14. Rejection. All Goods shall be received subject to UCBOE's inspection. Goods that are defective in workmanship or material or otherwise not in conformity with the requirements of the Contract Documents may be rejected and returned at Vendor's expense or may be accepted at a reduced price. UCBOE may require Vendor to promptly replace or correct any rejected Goods Services and, if Vendor fails to do so, UCBOE may contract with a third party to replace such Goods Services and charge Vendor the additional cost.
15. Warranties. Vendor warrants that all Goods delivered hereunder will be free from defects in materials and workmanship and will conform strictly to the specifications, drawings, or samples specified or furnished. This warranty shall survive any inspection, delivery, acceptance or payment by UCBOE of the Goods and shall run to UCBOE and any user of the Goods. This express warranty is in addition to Vendor's implied warranties of merchantability and fitness for a particular purpose which shall not be disclaimed. In addition to any other rights available at law or equity, UCBOE shall be entitled to all rights and remedies provided by the Uniform Commercial Code, Chapter 25 of the North Carolina General Statutes, for breach of express warranties and implied warranties of merchantability or fitness for a particular purpose, including but not limited to consequential and incidental damages.
16. Compliance with All Laws. Vendor warrants that all performance hereunder shall be in accordance with all applicable federal, state and local laws, regulations and orders. The right of Vendor to proceed may be terminated immediately by written notice if UCBOE determines that Vendor, its agent or another representative, has violated any provision of law.
17. Use of Federal Funds. If the source of funds for this Contract is federal funds, the following federal provisions apply pursuant to 2 C.F.R. § 200.326 and 2 C.F.R. Part 200, Appendix II (as applicable): Equal Employment Opportunity (41 C.F.R. Part 60); Davis-Bacon Act (40 U.S.C. 3141-3148); Copeland "Anti-Kickback" Act (40 U.S.C. 3145); Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708); Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387); Debarment and Suspension (Executive Orders 12549 and 12689); Byrd Anti-Lobbying Amendment (31 U.S.C. 1352); Procurement of Recovered Materials (2 C.F.R. § 200.322); and Record Retention Requirements (2 CFR § 200.324).
18. Registered Sex Offenders; Jessica Lunsford Act. Under North Carolina law, certain sex offenders are prohibited from coming onto school campuses. Vendor agrees to conduct an annual check of the N.C. Sex Offender and Public Protection Registration Program, the N.C. Sexually Violent Predator Registration Program and the National Sex Offender Registry for all of its employees whose job involves direct interaction with students as part of the job. UCBOE prohibits any personnel listed on such registries from being on any property owned or operated by UCBOE and from having any direct interaction with students. As a term of the Agreement, said checks must be performed by the Vendor and reported to UCBOE's Superintendent or designee, if Vendor's employees will be working directly with students. Under provisions set forth in the Jessica Lunsford Act under North Carolina law, the signature below certifies that neither Vendor nor any employee or agent of Vendor is

listed as a sex offender on the N.C. Sex Offender and Public Protection Registration Program, the N.C. Sexually Violent Predator Registration Program, and/or the National Sex Offender Registry.

19. Nondiscrimination. During the performance of the Contract, Vendor shall not discriminate against or deny the Contract's benefits to any person on the basis of sexual orientation, national origin, race, ethnic background, color, religion, gender, age or disability.
20. FERPA Electronically Stored Data Compliance: Vendor is expressly prohibited from selling or trading any education records or personally identifiable information acquired under the Agreement. Furthermore, Vendor agrees not to attempt to re-identify students from aggregated data. Further, Vendor will not use any personally identifiable information or education records to advertise or market to students of UCBOE or their parents. Any personally identifiable information and education records held by Vendor pursuant to the Agreement will be made available to UCBOE upon request. Vendor will store and process all data using appropriate administrative, physical, and technical safeguards to secure personally identifiable information and education records from unauthorized access, disclosure, and use. Vendor will conduct periodic risk assessments and remediate any identified security vulnerabilities in a timely manner. Vendor will also have a written incident response plan, to include prompt notification to UCBOE in the event of a security or privacy incident, as well as procedures for responding to a breach of data. Vendor agrees to share its incident response plan upon request. Vendor shall, for all personally identifiable data and education records in its possession and in the possession of any subcontractors, or agents to which it has transferred data as permitted herein, destroy or de-identify such data when such data is no longer needed to perform the Agreement. Vendor hereby agrees to abide by all Board of Education policies and procedures governing the confidentiality of student records and the responsible use of technology and internet safety. If Vendor experiences a security breach concerning any information covered by the Agreement, and such breach is covered by N.C.G.S. §75.61(14), then Vendor will (a) fully comply with Vendor's obligations under the N.C. Identity Theft Protection Act, (b) immediately notify UCBOE with the information listed in N.C.G.S. §75-65(d)(1-4), and (c) fully cooperate with UCBOE in carrying out its obligations under said Identity Theft Protection Act. Vendor will indemnify UCBOE for any breach of confidentiality or failure of its responsibilities to protect confidential information, and for cost of notification of affected persons as a result of its accidental or negligent release of personally identifiable information or education records provided to Vendor pursuant to the Agreement.
21. North Carolina Public Records Law: Vendor acknowledges that UCBOE is subject to the requirements of North Carolina's Public Records Law ("NCPRL"), N.C.G.S. § 132-1, et. seq. The Agreement and any related documents, papers, letters, maps, books, photographs, films, sound recordings, magnetic or other tapes, electronic data-processing records, artifacts, or other documentary material, regardless of physical form or characteristics, made or received by UCBOE in connection with the transaction of the Agreement may be considered a "public record," subject to disclosure under the NCPRL. UCBOE is under no obligation to notify Vendor prior to its compliance of its duties under NCPRL.
22. Conflict of Interest. Vendor represents and warrants that no member of UCBOE or any of its employees or officers who may obtain a direct benefit, personal gain or advantage for themselves or a relative or associate as a result of the Contract, subcontract or other agreement related to the Contract is in a position to influence or has attempted to influence the making of the Contract, has been involved in making the Contract, or will be involved in administering the Contract. Vendor also represents and warrants that, if the Contract is funded by any amount of federal funds, no violation of 2 C.F.R. § 200.318(c) or any other applicable federal conflict of interest law has occurred or will occur. Vendor shall cause this paragraph to be included in all Contracts, subcontracts and other agreements related to the Contract.
23. Gratuities. Vendor represents and warrants that no member of UCBOE or any of its employees has been or will be offered or given a gratuity to an official or employee of UCBOE in violation of applicable law or policy.
24. Kickbacks to Vendor. Vendor shall not permit any kickbacks or gratuities to be provided, directly or indirectly, to itself, its employees, subcontractors or subcontractor employees for the purpose of improperly obtaining or rewarding favorable treatment in connection with a UCBOE Contract or in connection with a subcontract relating to a UCBOE Contract. When Vendor has grounds to believe that a violation of this clause may have occurred, Vendor shall promptly report to UCBOE in writing the possible violation.
25. Iran Divestment Act. Vendor certifies that, as of the date listed below, it is not on the Final Divestment List, as created by the State Treasurer pursuant to N.C.G.S. § 143-6A-4, in violation of the Iran Divestment Act. In compliance with the requirements of the Iran Divestment Act and N.C.G.S. § 143C-6A-5(b), Vendor shall not

utilize in the performance of the contract any subcontractor that is identified on the Final Divestment List. The Final Divestment List can be found on the State Treasurer's website at the address www.nctreasurer.com/Iran and should be updated every 180 days.

26. Divestment from Companies that Boycott Israel. The Vendor certifies that it has not been designated by the North Carolina State Treasurer as a company engaged in the boycott of Israel pursuant to N.C.G.S. 147-86.81. It is the responsibility of each vendor or contractor to monitor compliance with this restriction. Contracts valued at less than \$1,000.00 are exempt from this restriction.
27. E-Verification. Vendor shall comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes
28. Indemnification. To the fullest extent permitted by law, Vendor shall indemnify and hold harmless UCBOE, its officers, agents, employees and assigns from and against all claims, losses, costs, damages, expenses, attorneys' fees and liability that any of them may sustain (a) arising out of Vendor's failure to comply with any applicable law, ordinance, regulation, or industry standard or (b) arising directly or indirectly out of Vendor's performance or lack of performance of the terms and conditions of the Contract. In the event that any Services and/or Goods sold and delivered or sold and performed under the Contract Documents shall be defective in any respect whatsoever, Vendor shall indemnify and save harmless UCBOE, its officers, agents, employees and assigns from all loss or the payment of all sums of money by reason of all accidents, injuries or damages to persons or property that shall happen or occur in connection with the use or sale of such Services and/or Goods and are contributed to by said condition. In the event Vendor, its employees, agents, subcontractors and or lower-tier subcontractors enter premises occupied by or under the control of UCBOE in the performance of the Contract Documents, Vendor agrees that it will indemnify and hold harmless UCBOE, its officers, agents, employees and assigns, from any loss, costs, damage, expense or liability by reason of property damage or personal injury of whatsoever nature or kind arising out of, as a result of, or in connection with such entry.
29. Insurance. Unless such insurance requirements are waived or modified by UCBOE or risk management ("DIRM"), Vendor certifies that it currently has and agrees to purchase and maintain during its performance under the Contract the following insurance from one or more insurance companies acceptable to UCBOE and authorized to do business in the State of North Carolina: Automobile - Vendor shall maintain bodily injury and property damage liability insurance covering all owned, non-owned and hired automobiles. The policy limits of such insurance shall not be less than \$1,000,000 combined single limit each person/each occurrence. Commercial General Liability - Vendor shall maintain commercial general liability insurance that shall protect Vendor from claims of bodily injury or property damage which arise from performance under the Contract. This insurance shall include coverage for contractual liability. The policy limits of such insurance shall not be less than \$1,000,000 combined single limit each occurrence/annual aggregate. Worker's Compensation and Employers' Liability Insurance - If applicable to Vendor, Vendor shall meet the statutory requirements of the State of North Carolina for worker's compensation coverage and employers' liability insurance. Vendor shall also provide any other insurance or bonding specifically recommended in writing by the DIRM or required by applicable law. Certificates of such insurance shall be furnished by Vendor to UCBOE and shall contain the provision that UCBOE be given 30 days' written notice of any intent to amend or terminate by either Vendor or the insuring company. Failure to furnish insurance certificates or to maintain such insurance shall be a default under the Contract and shall be grounds for immediate termination of the Contract.
30. Termination for Convenience. In addition to all of the other rights which UCBOE may have to cancel this Contract or an applicable Purchase Order, UCBOE shall have the further right, without assigning any reason therefore, to terminate the Contract (or applicable Purchase Order), in whole or in part, at any time at its complete discretion by providing 10 days' notice in writing from UCBOE to Vendor. If the Contract is terminated by UCBOE in accordance with this paragraph, Vendor will be paid in an amount which bears the same ratio to the total compensation as does the Services and/or Goods actually delivered or performed to the total originally contemplated in the Contract. UCBOE will not be liable to Vendor for any costs for completed Goods, Goods in process or materials acquired or contracted for if such costs were incurred prior to the date of this Contract or an applicable Purchase Order.
31. Termination for Default. UCBOE may terminate the Contract, in whole or in part, immediately and without prior notice upon breach of the Contract by Vendor. In addition to any other remedies available to UCBOE law or equity, UCBOE may procure upon such terms as UCBOE shall deem appropriate, Services and/or Goods

- substantially similar to those so terminated, in which case Vendor shall be liable to UCBOE for any excess costs for such similar goods, supplies, or services and any expenses incurred in connection therewith.
32. **Contract Funding.** It is understood and agreed between Vendor and UCBOE that UCBOE's obligation under the Contract is contingent upon the availability of appropriated funds from which payment for Contract purposes can be made. No legal liability on the part of UCBOE for any payment may arise until funds are made available to UCBOE's Finance Officer and until Vendor receives notice of such availability. Should such funds not be appropriated or allocated, the Contract shall immediately be terminated. UCBOE shall not be liable to Vendor for damages of any kind (general, special, consequential or exemplary) as a result of such termination.
 33. **Accounting Procedures.** Vendor shall comply with any accounting and fiscal management procedures prescribed by UCBOE to apply to the Contract and shall assure such fiscal control and accounting procedures as may be necessary for proper disbursement of and accounting for all project funds.
 34. **Improper Payments.** Vendor shall assume all risks attendant to any improper expenditure of funds under the Contract. Vendor shall refund to UCBOE any payment made pursuant to the Contract if it is subsequently determined by audit that such payment was improper under any applicable law, regulation or procedure. Vendor shall make such refunds within thirty (30) days after UCBOE notifies Vendor in writing that a payment has been determined to be improper.
 35. **Contract Transfer.** Vendor shall not assign, subcontract or otherwise transfer any interest in the Contract without the prior written approval of UCBOE.
 36. **Contract Personnel.** Vendor agrees that it has, or will secure at its own expense, all personnel required to provide the Services and/or Goods set forth in the Contract.
 37. **Key Personnel.** Vendor shall not substitute for key personnel (defined as those individuals identified by name or title in the Contract Documents or in written communication from Vendor) assigned to the performance of the Contract without prior written approval from UCBOE Project Coordinator (the individual at UCBOE responsible for administering the Contract).
 38. **Contract Modifications.** The Contract may be amended only by written amendment duly executed by both UCBOE and Vendor.
 39. **Relationship of Parties.** Vendor is an independent contractor and not an employee of UCBOE. The conduct and control of the work will lie solely with Vendor. The Contract shall not be construed as establishing a joint venture, partnership or any principal-agent relationship for any purpose between Vendor and UCBOE. Employees of Vendor shall remain subject to the exclusive control and supervision of Vendor, which is solely responsible for their compensation.
 40. **Advertisement.** The Contract will not be used in connection with any advertising by Vendor without prior written approval by UCBOE.
 41. **Monitoring and Evaluation.** Vendor shall cooperate with UCBOE, or with any other person or agency as directed by UCBOE, in monitoring, inspecting, auditing or investigating activities related to the Contract. Vendor shall permit UCBOE to evaluate all activities conducted under the Contract. UCBOE has the right at its sole discretion to require that Vendor remove any employee of Vendor from UCBOE Property and from providing Services and/or Goods under the Contract following provision of notice to Vendor of the reasons for UCBOE's dissatisfaction with the Services and/or Goods of Vendor's employee.
 42. **Financial Responsibility.** Vendor is financially solvent and able to perform under the Contract. If requested by UCBOE, Vendor agrees to provide a copy of its latest audited annual financial statements or other financial statements as deemed acceptable by UCBOE's Finance Officer. In the event of any proceedings, voluntary or involuntary, in bankruptcy or insolvency by or against Vendor, the inability of Vendor to meet its debts as they become due or in the event of the appointment, with or without Vendor's consent, of an assignee for the benefit of creditors or of a receiver, then UCBOE shall be entitled, at its sole option, to cancel any unfilled part of the Contract without any liability whatsoever.
 43. **Governmental Restrictions.** In the event any governmental restrictions are imposed which necessitate alteration of the material, quality, workmanship or performance of the items offered prior to their delivery, it shall be the responsibility of the Vendor to notify, in writing, the issuing purchasing office at once, indicating the specific regulation which required such alterations. UCBOE reserves the right to accept any such alterations, including any price adjustments occasioned thereby, or to cancel the Contract.
 44. **Inspection at Vendor's Site.** UCBOE reserves the right to inspect, at a reasonable time, the equipment/item, plant or other facilities of a prospective contractor prior to Contract award, and during the Contract term as

necessary for UCBOE determination that such equipment/item, plant or other facilities conform with the specifications/requirements and are adequate and suitable for the proper and effective performance of the Contract.

45. Confidential Information. All information about UCBOE provided to the Vendor or its officers, employees, agents, representatives and advisors (the "Vendor Representatives"), and all copies or other full or partial reproductions thereof and notes, memoranda or other writings related thereto created by Vendor or any Vendor Representative, regardless of whether provided before or after the date of the Contract and regardless of the manner or medium in which it is furnished, is referred to as "Confidential Information". Confidential Information does not include any information that (a) is or becomes generally available to the public other than as a result of an impermissible disclosure by Vendor, (b) was known by or available on a nonconfidential basis to Vendor before it was disclosed by UCBOE or (c) becomes available to Vendor on a nonconfidential basis from a third party whom Vendor does not know to be bound by a confidentiality agreement with, or have an obligation of secrecy to, UCBOE. Except as and to the extent required by law or order or demand of any governmental or regulatory authority, Vendor and Vendor Representatives will (x) keep all Confidential Information confidential and (y) will only disclose or reveal any Confidential Information to Vendor Representatives who must have the information to fulfill Vendor's obligations under the Contract and who agree to observe the terms of this Section. Vendor and Vendor Representatives will not use the Confidential Information for any purpose other than fulfilling Vendor's obligations under the Contract. By way of example and not limitation, Vendor shall not sell, market, or commercialize Confidential Information, create derivative products or applications based on Confidential Information. If Vendor is requested or required, pursuant to applicable law or regulation or by legal process, to disclose any Confidential Information, Vendor will provide UCBOE with prompt and timely notice of the requests or requirements so that UCBOE can seek an appropriate protective order or other remedy and will not be prejudiced by delay. If UCBOE does not obtain a protective order or other remedy, Vendor will only disclose that portion of the Confidential Information which Vendor's legal counsel determines Vendor is required to disclose. Upon termination of the Contract or otherwise upon UCBOE's request, Vendor will promptly deliver to UCBOE all Confidential Information in the possession of Vendor or the Vendor Representatives.

Student Information: If, during the course of Vendor's performance of the Contract, Vendor should obtain any information pertaining to students or students' official records, Vendor agrees to keep any such information confidential and to not disclose or permit it to be disclosed, directly or indirectly, to any person or entity. The Contract shall not be construed by either party to constitute a waiver of or to in any manner diminish the provisions for confidentiality of students' records. Additionally, pursuant to N.C.G.S. 115C-401.1, it is unlawful for a person who enters into a contract with a local board of education to sell personally identifiable information that is obtained from a student as a result of that person's performance under the Contract.

Employee Personnel Information: If, during the course of Vendor's performance of the Contract, Vendor should obtain any information pertaining to employees of UCBOE's personnel records, Vendor agrees to keep any such information confidential and to not disclose or permit it to be disclosed, directly or indirectly, to any person or entity. This section will survive the termination of this Contract.

46. Intellectual Property. Vendor agrees, at its own expense, to indemnify, defend and save UCBOE harmless from all liability, loss or expense, including costs of settlement and attorney's fees, resulting from any claim that UCBOE's use, possession or sale of the Services and/or Goods infringes any copyright, patent or trademark or is a misappropriation of any trade secret.
47. No Pre-Judgment or Post-Judgment Interest. In the event of any action by Vendor for breach of contract in connection with the Contract, any amount awarded shall not bear interest either before or after any judgment, and Vendor specifically waives any claim for interest.
48. Background Checks. At the request of UCBOE's Project Coordinator, Vendor (if an individual) or any individual employees of Vendor shall submit to UCBOE criminal background check and drug testing procedures.
49. Mediation. If a dispute arises out of or relates to the Contract, or the breach of the Contract, and if the dispute cannot be settled through negotiation, the parties agree to try in good faith to settle the dispute by mediation administered by the American Arbitration Association under its Commercial Mediation Rules before resorting to litigation.

50. No Third-Party Benefits. The Contract shall not be considered by Vendor to create any benefits on behalf of any third party. Vendor shall include in all contracts, subcontracts or other agreements relating to the Contract an acknowledgment by the contracting parties that the Contract creates no third-party benefits.
51. Force Majeure. Neither party shall be responsible to the other for any losses resulting from the failure to perform any terms or provisions of the Agreement if the party's failure to perform is attributable to war, riot or other disorder, strike or other work stoppage; fire; flood; storm; illness; pandemic, communicable disease, or any other act not within the control of the party whose performance is interfered with, and which, by reasonable diligence, such party is unable to prevent. However, UCBOE will be entitled to a refund for fees paid on account of services not rendered by Vendor including any and all deposits.
52. Ownership of Documents; Work Product. All documents created pursuant to the Contract shall, unless expressly provided otherwise in writing, be owned by UCBOE. Upon the termination or expiration of the Contract, any and all finished or unfinished documents and other materials produced by Vendor pursuant to the Contract shall, at the request of UCBOE, be turned over to UCBOE. Any technical knowledge or information of Vendor which Vendor shall have disclosed or may hereafter disclose to UCBOE shall not, unless otherwise specifically agreed upon in writing by UCBOE, be deemed to be confidential or proprietary information and shall be acquired by UCBOE free from any restrictions as part of the consideration of the Contract.
53. Strict Compliance. UCBOE may at any time insist upon strict compliance with these terms and conditions notwithstanding any previous course of dealing or course of performance between the parties to the contrary.
54. General Provisions. UCBOE's remedies as set forth herein are not exclusive. Any delay or omission in exercising any right hereunder, or any waiver of any single breach or default hereunder, shall not be deemed to be a waiver of such right or of any other right, breach, or default. If action be instituted by Vendor hereunder, UCBOE shall be entitled to recover costs and reasonable attorney's fees. Vendor may not assign, pledge, or in any manner encumber Vendor's rights under this Contract or applicable Purchase Order or delegate the performance of any of its obligations hereunder, without UCBOE's prior, express written consent.
55. Contract Situs. All matters, whether sounding in contract or tort relating to the validity, construction, interpretation and enforcement of the Contract, will be determined in Union County, North Carolina. North Carolina law will govern the interpretation and construction of the Contract.
56. Severability. Any provision of this Contract that is determined by any court of competent jurisdiction to be invalid or unenforceable will not affect the validity or enforceability of any other provision. Any provision of the Contract held invalid or unenforceable only in part or degree will remain in full force and effect to the extent not held invalid or unenforceable.

II. Additional Standard Terms and Conditions for Construction Contracts

1. Supervision and Provision for Labor and Supplies. The Vendor will supervise and direct the construction work (the "Work") and shall furnish, provide, and pay for all labor, materials, equipment, machinery, utilities, and services reasonably necessary for the execution and completion of the Work.
2. Coordination of Work and Notification of Progress. The Vendor agrees to coordinate its Work with the work of any other separate contractors or with the work of UCBOE's own forces to avoid delaying or interfering with their work. Vendor shall enforce good order and discipline among his employees and subcontractors on the Project. The Vendor further agrees to inform UCBOE on a regular basis or at UCBOE's request of the progress of the Work.
3. Provision for all Permits, Licenses, and Inspections. Unless otherwise provided, the Vendor shall secure and pay for all permits, licenses, and inspections necessary for the proper execution and completion of the Work.
4. Cleanliness. Vendor shall keep the Project reasonably free from waste materials or rubbish resulting from the Vendor's operations.
5. Additional Warranties. The Vendor warrants that the Vendor has visited the location of the Project and is familiar with all field conditions bearing upon the Vendor's performance of the Work; that the materials and equipment furnished under the Contract are of good quality and new (unless otherwise permitted); that the Work is non-negligent and meets or exceeds the standards ordinarily observed in the industry; and that the Work conforms to the requirements of the Contract and to all applicable codes, ordinances, laws, or regulations. The Vendor further warrants and promises that the Work shall be free from defects

and nonconformities in materials and workmanship for a period of one year from the later of the Date of Completion, which is the date UCBOE accepts the Work or such date as the Vendor actually completes all the Work (the "Date of Completion"). During such period, the Vendor will remedy at Vendor's expense nonconformities or defects in the Work within a reasonable time after receiving notice thereof from UCBOE.

6. Indemnity for Subcontractor Payment. In addition to the indemnification obligations contained in the attached terms and conditions to this Contract, the Vendor further agrees to defend and indemnify UCBOE from and against all claims, damages, losses, and expenses, including reasonable attorneys' fees, arising out of the Vendor's failure to pay subcontractors or materials suppliers.
7. Change Orders. The Vendor agrees that UCBOE may order changes in the general scope of the Work, including additions, deletions, and similar revisions. The parties agree to adjust the Contract Price and Date of Completion to reflect the effects of such changes, which adjustments shall be authorized only upon execution of a written change order (a "Change Order"). In case of emergency or extenuating circumstances or if a construction contingency is provided as stated below, approval of changes may be obtained verbally by telephone or field orders approved by UCBOE Project Coordinator and promptly thereafter substantiated in writing as outlined under normal procedures. The amount of any increase or decrease in the Contract Price shall be by mutual acceptance of a total amount supported by sufficient data and information to substantiate the change. Any decrease in Contract Price for a decrease in the Work will be the reasonable costs of the Work deleted, including a reasonable amount for the decrease in the Vendor's overhead.
8. Performance/Payment Bond. If required by law and/or the bidding documentation, the Vendor agrees to provide a Performance Bond and Labor and Material Payment Bond for its faithful performance in a form reasonably satisfying to UCBOE.
9. Payments Withheld. The UCBOE may withhold payment for the following reasons to the extent permitted under N.C. Gen. Stat. § 143-134.1(e): (1) defective Work not remedied; (2) third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to UCBOE is provided by the Vendor; (3) failure of the Vendor to make payments properly to subcontractors or for labor, materials or equipment; (4) reasonable evidence that the Work will not be completed with the time specified, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; (5) failure to carry out the Work in accordance with the Contract Documents; (6) failure to provide sales tax documentation in accordance with subparagraph 9.3.5; (7) failure or refusal of the Vendor to submit the required information on minority business enterprises; and (8) failure of the Vendor to comply with (a) the provisions of the Sedimentation and Pollution Control Act (N.C. Gen. Stat. § 113A-50 *et seq.*), and/or (b) any Notice of Violation issued by the North Carolina Department of Natural Resources.
10. Retainage. For public construction contracts costing an amount equal to or greater than \$100,000, the UCBOE will retain five percent of the amount of each progress payment on the project for as long as is authorized by N.C. Gen. Stat. § 143-134.1. At all times during the Project, the UCBOE may retain the maximum funds allowed by N.C. Gen. Stat. § 143-134.1. The UCBOE specifically reserves the right to withhold additional funds as authorized by this Contract and N.C. Gen. Stat. § 143-134.1. The Vendor may pay each subcontractor no later than seven days after receipt of payment from the UCBOE and in accordance with N.C. Gen. Stat. § 143-134.1 the amount to which the subcontractor is entitled, reflecting percentages actually retained from payments to the Vendor on account of the subcontractor's portion of the Work. The Vendor shall, by appropriate agreement with each subcontractor, require each subcontractor to make payments to sub-subcontractors in a similar manner and in accordance with N.C. Gen. Stat. § 143-134.1.
11. The Vendor shall use and submit applications for payment using a form reasonably satisfactory to UCBOE ("Application for Payment"). The Contractor shall submit with each Application for Payment a completed "Statement of Sales Tax Paid" and "Minority Business Enterprise" documentation in a form acceptable to UCBOE.

III. Additional Standard Term and Condition for Designer Contracts (which include Architectural, Engineering, Surveying, and Technical Services)

Additional Insurance. In addition to the insurance required pursuant to Section 22 of the Standard Terms and Conditions for All Contracts, the Vendor certifies that it currently has and agrees to purchase and maintain during its performance under the Contract the following insurance from one or more insurance companies acceptable to UCBOE and authorized to do business in the State of North Carolina: Professional liability insurance in commercially reasonable amounts as reasonably determined by UCBOE.

IV. Additional Standard Terms and Conditions for Information Technology Contracts

1. Definitions.

“Hardware” means the hardware the Vendor utilizes in the Hosted Environment for delivery and maintenance of the Hosted Software Services.

“Hosted Environment” means the Hardware, system software, hosting support software, network connectivity, and facility used by Vendor to support the Hosted Software Services.

“Hosted Software Services” means the application, including the Hosted Software and any applicable Third-Party Software, as run on the Hosted Environment.

“Hosted Software” means the software owned and controlled by Vendor or Vendor’s third-party contractor that supports the Hosted Software Services.

“Support Services” means application and technical support required to maintain the performance, uptime and connectivity of the Hosted Software Services for UCBOE access and use, including without limitation, telephone support, error correction, maintenance, and installation of Updates and Upgrades to the Hosted Software.

“Updates” means (i) modifications to or releases of the Hosted Software that (a) add new features, functionality, and/or improved performance, (b) operate on new or other databases, operating systems, or server platforms or (c) extend the Hosted Software functionality to take advantage of advances in coding language, hardware, network or wireless infrastructures; and (ii) deviation corrections, bug or error fixes, patches, workarounds, and maintenance releases.

“Upgrades” means any new version or new release of the Hosted Software typically provided on an annual or bi-annual basis by the Vendor that includes new features, functions, support or service that were not in place with the immediately prior version.

2. Grant of License. Vendor grants to UCBOE for the term of this Contract a non-exclusive, non-transferable license to access and use over the internet the Hosted Software (the “License”).

3. Updates and Upgrades. Vendor will make certain limited and applicable Hosted Software Updates and Upgrades available to UCBOE at no additional cost. All such Updates and Upgrades shall automatically become subject to the benefits and terms of this Contract and shall automatically be considered part of the License granted under this Contract.

4. Security. Vendor’s Hosted Environment shall maintain security measures in place to help protect against the loss, misuse, and alteration of the Hosted Software Services, and specifically the Confidential Information provided to Vendor by UCBOE.

5. Warranties. Vendor warrants the following: (a) Vendor has the full authority to grant the License; (b) the Hosted Software is free from material defects or viruses; (c) the Hosted Software contains no disabling devices; and (d) the Hosted Software conforms to all material specifications set forth in the documentation and any other written material provided to UCBOE for any purpose. Without limiting any other remedies available to UCBOE under this Contract, at law or in equity, in the event that any Hosted Software does not conform to the warranties set forth for the Hosted Software herein, Vendor shall, at UCBOE’s option, promptly correct or replace such Hosted Software and, in either case, Vendor shall perform any Support Services or other work required to restore the Hosted Software to the state that existed prior to any such breach, all at Vendor’s expense. UCBOE reserves the right to reject the Hosted Software and to hold Vendor responsible for any loss, direct or indirect, caused by any such breach of warranty. In the event Vendor is or becomes aware of a problem with any item of Hosted Software, Vendor shall notify UCBOE upon such determination. Acceptance or use of the Hosted Software shall not constitute a waiver of any claim under any warranty.

. Effect of Termination and Orderly Transition. Upon termination or expiration of this Contract for any reason, Vendor will cooperate in good faith with UCBOE to provide for an orderly transfer of the Goods and Services

and Confidential Information to UCBOE or UCBOE's successor vendor ("Orderly Transition") and according to the terms of this section.

- a. Scope of Work for Orderly Transition. Within thirty (30) days of notification by UCBOE that it will transfer Goods and Services to itself or a successor vendor, the parties will create and execute a scope of work document detailing tasks, the responsible parties for individual tasks, and timeframes for completion of tasks necessary to complete an Orderly Transition. The final, executed Orderly Transition scope of work shall be incorporated into this Contract and become subject to its terms. Vendor's failure to (a) cooperate in developing the Orderly Transition scope of work, (b) execute an Orderly Transition scope of work, or (c) abide by the executed Orderly Transition scope of work shall be deemed a material breach of this Contract.
 - b. Time Frame. Unless otherwise mutually agreed in an executed Orderly Transition scope of work, Vendor shall continue to provide Goods and Services while UCBOE migrates its Confidential Information from Vendor's Hosted Software Services in the Orderly Transition process. Vendor agrees that, as part of the Orderly Transition process and within the specified time frame, it will transfer to UCBOE all of the Confidential Information provided to Vendor by UCBOE pursuant to this Contract. Vendor will provide the Confidential Information in commercially reasonable electronic format as agreed in the Orderly Transition scope of work at no additional cost.
 - c. Time and Material Costs Only. UCBOE will be obligated to pay for time and materials at a reasonable hourly rate of no more than \$75/hour for the Orderly Transition. No other fees will be assessed for the Orderly Transition. Fees shall be agreed upon in advance as part of developing the scope of work referenced in subsection (a) above.
 - d. Destruction of Confidential Information after Orderly Transition. Unless otherwise mutually agreed in an executed Orderly Transition scope of work, Vendor agrees that after returning all Confidential Information to UCBOE pursuant to subsection (b) above it will destroy all remaining copies of Confidential Information and back-up Confidential Information in its possession, contained in or on any medium (such as a storage area network or "SAN") or as may be stored offsite, within thirty (30) days of completion of Orderly Transition. Vendor shall provide UCBOE with a detailed summary of the destruction process and standards to be utilized by Vendor with respect to the Confidential Information, and UCBOE shall approve such process and standards prior to Vendor commencing such destruction.
7. Intellectual Property Warranty. In addition to the warranties set forth elsewhere in this Contract with respect to the Goods and Services, Vendor expressly represents, warrants and covenants that neither the furnishing of Hosted Services to UCBOE hereunder, nor does the Hosted Software, violate, in whole or in part, any provision of any law, common law or regulation concerning copyrights, trade secrets, trademarks, tradenames, service marks, patents or other provisions regulating or concerning intellectual property rights.
 8. Additional Indemnification. To the fullest extent permitted by law, Vendor shall indemnify, defend and hold harmless UCBOE, its and directors, officers, managers, employees and agents, from all suits, claims, costs, damages and other liabilities, including reasonable attorneys' fees as incurred by counsel of UCBOE's choice, relating to or arising from (a) Vendor's failure to maintain the security and integrity of Confidential Information, the Hosted Software Services and the Hosted Environment; (b) any claim for infringement of any copyright, trade secret, trademark, tradename, service mark, patent, or other law or regulation concerning intellectual and/or proprietary property rights; and (c) any claims by third party interests in the Hosted Software.
 9. Data Use. Notwithstanding the foregoing, Vendor acknowledges and agrees that all Confidential Information is proprietary to and owned exclusively by UCBOE, whether provided in tangible or electronic form and whether entered into any software or Hosted Software Services owned or licensed by Vendor (including without limitation the Hosted Software and Hosted Software Services) or otherwise provided in connection with any products provided and services performed by Vendor (including without limitation the Goods and Services) and whether to, by or through a Vendor-affiliated ASP or other Hosted Software Services. Furthermore, Vendor shall not sell, market, or commercialize Confidential Information, create derivative products or applications based on Confidential Information or otherwise use Confidential Information in any manner unrelated to the performance of Vendor's obligations under the Contract. Vendor shall not share Confidential Information with any parent or subsidiary company of Vendor or any other Vendor-affiliated entity without the express prior written consent of UCBOE detailing the scope of allowable disclosure. Vendor agrees that if it breaches this

section, UCBOE may, at its option, pursue any or all of the following remedies: (a) immediately terminate this Contract without liability to Vendor; (b) seek an injunction without posting a bond; and (c) pursue whatever other remedies may be available to it at law, in equity or pursuant to this Contract.



**UNION COUNTY PUBLIC SCHOOLS
2023-UCPS-R-3-MONROE HIGH SCHOOL
ROOF RENOVATION PROJECT
PROJECT MANUAL**

BID # 4-97336031

**1 HIGH SCHOOL DR
MONROE, NC 28112**

Sealed October 2023

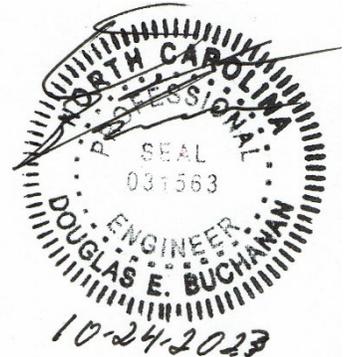
Prepared by:



WOLF TRAIL™
ENGINEERING

NC P-1817 | SC 5872

1001 Lancaster Avenue | Monroe, NC 28112
704.282.0826 | WolfTrailEngineering.com



**SECTION 00 01 10
TABLE OF CONTENTS**

DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS

Introductory Information

00 01 01	Title Page
00 01 10	Table of Contents
00 01 15	List of Drawings

Procurement Requirements

00 11 13	Advertisement for Bids
00 21 13	Instructions to Bidders
00 22 13	Supplementary Instructions to Bidders
00 26 00	Procurement Substitution Procedures
00 31 13	Preliminary Schedule
00 31 26	Asbestos Letter

Procurement Forms and Supplements

00 41 13	Bid Form
00 43 13	Bid Bond
00 43 39	MBE Guidelines
00 43 39.1	MWSBE Forms

Project Forms

00 60 00	Project Forms
00 61 13.13	Performance Bond
00 61 13.16	Payment Bond
00 62 33	Roofing Manufacturer's Acknowledgement
00 62 76.13	Sales Tax Statement
00 63 63	G701-2017 Change Order from-Sample
00 65 14	Asbestos Free Statement
00 65 36	Contractor's Warranty Form
00 65 37	Roofing Warranty Form

Conditions of the Contract

00 72 13	AIA 201 General Conditions of the Contract
00 73 00	Supplementary Conditions

DIVISION 01 GENERAL REQUIREMENTS

01 11 00	Summary of Work
01 14 00	Work Restrictions
01 21 00	Contingency and Allowances
01 22 00	Unit Prices
01 23 00	Alternates
01 25 00	Substitution Procedures
01 26 00	Contract Modification Procedures

01 29 00	Payment Procedures
01 31 19	Project Meetings
01 33 00	Submittal Procedures
01 40 00	Quality Requirements
01 42 00	References
01 50 00	Temporary Facilities and Controls
01 60 00	Product Requirements
01 73 29	Cutting and Patching
01 74 13	Progress and Final Cleaning
01 74 19	Construction and Waste Management Disposal
01 77 00	Closeout Procedures
01 78 36	Warranties

DIVISION 04 MASONRY

04 05 23	Masonry Accessories – Mortar Deflection Mat
04 21 00	Clay Masonry

DIVISION 05 METALS

05 31 23	Steel Roof Decking
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DIVISION 06 ROUGH CARPENTRY

06 10 00	Rough Carpentry
----------	-----------------

DIVISION 07 THERMAL AND MOISTURE PROTECTION

07 24 00	Insulation and Finish systems (EIFS)
07 54 19	Thermoplastic (PVC) Roofing Membrane
07 62 00	Sheet Metal Flashing and Trim

MISCELLANEOUS FORMS

E-Verify Affidavit
Certification of Waiver of Lien
Subcontractor Documentation for Contract Payments
Iran Divestment Act Certification
Jessica Lunsford Act

SECTION 00 01 15
LIST OF DRAWINGS

The following drawings and details are included as part of the Contract Documents:

<u>Drawing</u>	<u>Description</u>	<u>Date</u>
C01	Cover	9-5-2023
AP1	Appendix B	9-5-2023
DP01	Detail Plan	9-5-2023
DP02	Detail Plan	9-5-2023
DP03	Detail Plan	9-5-2023
R-1	Roof Details	9-5-2023
R-2	Roof Details	9-5-2023
R-3	Roof Details	9-5-2023
R-4	Roof Details	9-5-2023
RA1	Roof Accessories	9-5-2023
UP1	Wind Up Lift	9-5-2023
UP2	Wind Up Lift	9-5-2023
IR	Infrared Survey	9-5-2023

END OF SECTION 00 01 15

SECTION 00 11 13
ADVERTISEMENT FOR BIDS

Sealed bids for the **Union County Public Schools, Monroe High School Roof Renovation Project**, 1 High School Dr, Monroe, NC 28112 will be received by the Owner at Union County Public Schools Maintenance Facility, 201 Venus St., Monroe, NC 28112, by **1:30 p.m., January 18th, 2024**, at which time bids will be opened publicly and read aloud.

The Owner is: **Union County Public Schools**
 C/O: Penny Helms, UCPS
 Address: 201 Venus St.
 Monroe, NC 28112

 Project Manager: Maurice Brown

The Engineer is: **Wolf Trail Engineering, LLC**
 Attention: Lynne Hall
 Phone # 704-282-0826
 Email: Lynne@wolftrailengineering.com

Prime Bidders & major subcontractors may receive a complete PDF set of plans and specifications upon request to the office of the Engineer.

All questions should be directed to the Engineer at the phone number shown above.

A Pre-Bid conference is scheduled for **10:00 a.m., January 4th, 2023**, at 1 High School Dr, Monroe, NC 28112. Attendance is Required.

A bid security for 5% of the total bid amount shall be submitted with each bid.

The Owner reserves the right to reject any and all bids, to waive informalities, and to award the contract to another bidder, other than the low bidder, should it be deemed in their best interest.

SECTION 00 21 13
INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.1 SECURING DOCUMENTS

- A. Obtain procurement documents for bidding purposes under conditions as set forth in the Advertisement for Bid.

1.2 BID FORM

- A. Submit Bids on the forms provided, properly executed and with all items filled out. Modification of the Bid Form, attachment of conditions or limitation of provisions may be cause for rejection of the Bid. Alterations, erasure, or interlineations must be noted with explanation on the Bid Form over the signature of the Bidder.

1.3 FAMILIARITY WITH WORK AND CONDITIONS:

- A. Before preparing Bids, Bidders are urged to visit the site to inform and familiarize themselves with all conditions involved and under which the project is to be constructed or apparatus erected or installed. The Owner will not be responsible to the Contractor for payments other than as set out in the Construction Contract should construction conditions be different from those assumed or contemplated by the Contractor. The Contractor is required to satisfy himself, before bidding, as to the correctness of the site as indicated by the Contract Documents.

1.4 SUBMISSION OF BIDS

- A. Deliver Bid to the location indicated in the Advertisement for Bid before time set for receipt of bids. Submit Bid in an opaque, sealed envelope and marked in the lower left-hand corner with the following information:

1. Bidder's Name
2. Bidder's Address
3. Bidder's Phone
4. Contractor's License No.
5. Title of Project
6. Date and Time of the Bid Opening

- B. If not delivered in person, envelope shall be enclosed in a second envelope for posting to the location indicated for receipt of bids. Address outside envelope as follows:

**C/O: Penny Helms
201 Venus St., Monroe, NC 28112
Label Packages "URGENT- TIME SENSITIVE BID ENCLOSED"**

- C. It is the sole responsibility of the Bidder to submit Bid prior to time fixed for receipt.

- D. Electronic submission of Bids or Bid modifications will not be accepted. Bids received after the time fixed for receipt will be considered late and will be returned to the Bidder unopened.

1.5 BID SECURITY

- A. A Bid Security in the amount of 5 percent (5%) of the Bid Sum shall be furnished with the submission of the Bid. Acceptable Bid Securities include a bid bond, certified check, or other type of security, as stipulated by the North Carolina General Statutes. Submitted Bid Security should be on the Owner's form, attached in the Project Manual.

1.6 PERFORMANCE AND PAYMENT BONDS

- A. Performance Bond and Labor and Material Payment Bonds, each in the amount of 100 percent of the Contract Sum, shall be furnished at the time of Contract execution. Submit Bonds on the forms attached in the Project Manual. See Sections 00 61 13.13 and 00 61 13.16

1.7 EXAMINATION OF CONTRACT DOCUMENTS AND SITE OF WORK

- A. Prior to submitting Bid, each Bidder shall carefully examine the proposed Contract Documents and visit the project site. Bidders shall fully inform themselves, prior to Bidding, as to all existing conditions and limitations under which the Work is to be performed and shall include in the Bid Sum an amount to cover the cost of all items necessary to perform the Work as set forth in the proposed Contract Documents. No allowance will be made due to lack of such examination or knowledge. The contractor shall verify the square footage of the roof in the project. The submission of a Bid shall be construed as conclusive evidence that the Bidder has made such an examination.

1.8 SUBSTITUTIONS

- A. Each Bidder represents that their Bid is based upon the materials and equipment described in the proposed Contract Documents. Substitutions will be considered during the Bidding process in accordance with Document 00 26 00 - Procurement Substitution Procedures. Substitutions after the execution of the Agreement will only be considered in strict accordance with Section 01 25 00 - Substitution Procedures.

1.9 MODIFICATION AND WITHDRAWAL OF BIDS

- A. Bids may be withdrawn upon request from the Bidder prior to opening time. Withdrawn Bids may be resubmitted up to opening time. Negligence or error on the part of the Bidder in preparing his Bid confers no right for withdrawal of the Bid after it has been opened. No Bid may be withdrawn for 90 calendar days after opening except as provided by North Carolina G.S. 143-129.1.

1.10 AWARD OR REJECTION OF BIDS

- A. Award of Contract, if awarded, will be based on, but not limited to, the following criteria:
 - 1. Cost (best advantage for the Owner)
 - 2. Submission of the Owner's required qualification documents before or with the Bid.
 - 3. Acceptance of the contractor's qualifications based on the response to the contractor qualification documents demonstrating his past performance and ability to complete similar work.
 - 4. Conformance with contract documents
 - 5. Acceptable date of delivery
 - 6. Acceptable Form of Bid Security
 - 7. Other reasonable factors deemed fit by the Owner.
- B. A Single Prime Contract will be awarded.
- C. To be considered, a minimum of three Bidders must submit for the Contract.
- D. All bids are subject to the Owner's right to reject any or all bids and to waive any informality in the bids or in the bidding. Failure to provide qualifications, complete all information required on the bid form, or provide adequate bid security may result in rejection of bid.

1.11 EXECUTION OF AGREEMENT

- A. The successful Bidder, to whom the Contract is awarded by the Owner, shall, within 10 days after Notice of Award from the Owner, sign and deliver to the Owner all required copies of the Agreement.
- B. Prior to or in conjunction with delivery of the executed Agreement, the Contractor shall deliver to the Owner documents described in the Project Manual and the policies or certificates of insurance as required by the Contract Documents. The Owner shall approve all bonds and policies or certificates of insurance before the Contractor may proceed with the Work.
- C. Failure or refusal to furnish Bonds or insurance policies or certificates in a form satisfactory to the Owner shall subject the Bidder to forfeiture of Bid Security.

1.12 INTERPRETATION OF CONTRACT DOCUMENTS PRIOR TO BIDDING

- A. If any person contemplating submitting a Bid for the construction of the Work is in doubt as to the true meaning of any part of the proposed Contract Documents or finds discrepancies in or omissions from any part of the Contract Documents, they may submit to the Architect a written request for interpretation or correction thereof, no later than 7 calendar days prior to the receipt of Bids.
- B. Communications regarding this Work should be addressed to the Architect indicated in the Advertisement for Bids.

- C. Interpretation or correction of the Contract Documents shall be made by written addendum and will be mailed, faxed, or delivered to each Bidder of record. The Owner will not be responsible for any other explanations or interpretation of the Contract Documents.
- D. It is the responsibility of each Bidder to verify that they have received all Addenda before submitting a Bid. It is the responsibility of all sub-bidders and material suppliers to be familiar with and to include in their price, all Addenda issued up to the time of Bid opening. Requests for clarification or additional information shall be accepted only from Bidder submitting as the General Contractor, sub-Bidders and suppliers shall coordinate their requests through these Bidders.

1.13 PRE-BID CONFERENCE

- A. A pre-bid conference will be held as indicated in the Advertisement for Bids. All prospective bidders are requested to attend. The conference will include a discussion of the proposed site of the work, discussion of the scope and nature of the work, review of the proposed Contract Documents, and discussion of questions submitted by the Bidders.

1.14 CONSTRUCTION TIME AND LIQUIDATED DAMAGES

- A. The Conditions of the Contract include stipulations that the Work be completed within the Contract Time expressed in calendar days.
 - 1. Article 1) Obligations of Contractor of the Conditions of the Contract (Section 00 70 00) includes a stipulation, states that Liquidated Damages accrue per calendar day for each day Work remains incomplete beyond the Contract Completion Date. Refer to the Document 00 31 13 - Preliminary Schedule (Sample) included in the Project Manual for proposed start, completion, and intermediate milestones.

1.15 ROOF MANUFACTURER'S ACKNOWLEDGEMENT

- A. The roof system manufacturer shall complete the Roof Manufacturer's Acknowledgement (Section 00 62 33) form. The Contractor shall enclose the signed Roof Manufacturer's Acknowledgement form from the manufacturer they intend to use on the project with their bid.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 00 21 13

DOCUMENT 002213 - SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1.1 INSTRUCTIONS TO BIDDERS

A. Instructions to Bidders for Project consist of the following:

1. AIA Document A701, "Instructions to Bidders," a copy of which is bound in this Project Manual.
2. The following Supplementary Instructions to Bidders that modify and add to the requirements of the Instructions to Bidders.

1.2 SUPPLEMENTARY INSTRUCTIONS TO BIDDERS, GENERAL

- #### A. The following supplements modify AIA Document A701, "Instructions to Bidders." Where a portion of the Instructions to Bidders is modified or deleted by these Supplementary Instructions to Bidders, unaltered portions of the Instructions to Bidders shall remain in effect.

1.3 ARTICLE 2 - BIDDER'S REPRESENTATIONS

A. Add Section 2.1.3.1:

1. 2.1.3.1 - The Bidder has investigated all required fees, permits, and regulatory requirements of authorities having jurisdiction and has properly included in the submitted bid the cost of such fees, permits, and requirements not otherwise indicated as provided by Owner.

B. Add Section 2.1.5:

1. 2.1.5 - The Bidder is a properly licensed Contractor according to the laws and regulations of the State of North Carolina and meets qualifications indicated in the Bidding and Contracting Documents.

C. Add Section 2.1.6:

1. 2.1.6 - The Bidder has incorporated into the Bid adequate sums for work performed by installers whose qualifications meet those indicated in the Bidding and Contracting Documents.

D. Add Section 2.1.7:

1. Bidder has investigated with governing authorities all required fees, permits and other regulatory requirements and shall have included the cost of each in its bid. Bidder awarded a contract shall pay all such costs unless specifically stated otherwise in the Bidding Documents.

E. Add Section 2.1.8:

1. By submitting a bid, Bidder agrees to waive any claim Bidder may have against the Owner or Architect arising out of or in connection with the administration, evaluation, or recommendation of any bid.

1.4 ARTICLE 3 - BIDDING DOCUMENTS

A. 3.2 - Interpretation or Correction of Bidding and Contracting Documents:

1. Add Section 3.2.2.1:
 - a. 3.2.2.1 - Submit Bidder's Requests for Interpretation using form bound in the Project Manual **[and furnished on Project Web site]**.

B. 3.3 Substitutions:

1. Add Section 3.3.5:
 - a. Approval of a proposed substitution is for a single project only. Specification or approval of products on Owner's previous projects does not constitute approval for use of product on this Project.
2. Add Section 3.3.6:
 - a. Comply with requirements in Document 002600 "Bidding Substitution Procedures." Only substitution requests submitted by a prime Bidder will be considered.

C. 3.4 - Addenda:

1. Add Section 3.4.4.1:
 - a. 3.4.4.1 - Owner may elect to waive the requirement for acknowledging receipt of 3.4.4 Addenda as follows:
 - 1) 3.4.4.1.1 - Information received as part of the Bid indicates that the Bid, as submitted, reflects modifications to the Bidding and Contracting Documents included in an unacknowledged Addendum.
 - 2) 3.4.4.1.2 - Modifications to the Bidding and Contracting Documents in an unacknowledged Addendum do not, in the opinion of Owner, affect the Contract Sum or Contract Time.

1.5 ARTICLE 4 - BIDDING PROCEDURES

A. 4.1 - Preparation of Bids:

1. Add Section 4.1.1.1:
 - a. 4.1.1.1 - Printable electronic Bid Forms and related documents are available **[from the Architect] [on the Project web site]**.

2. Add Section 4.1.8:
 - a. 4.1.8 - The Bid shall include unit prices when called for by the Bidding and Contracting Documents. Owner may elect to consider unit prices in the determination of award. Unit prices will be incorporated into the Contract.
 3. Add Section 4.1.9:
 - a. 4.1.9 - Owner may elect to disqualify a bid due to failure to submit a bid in the form requested, failure to bid requested alternates or unit prices, failure to complete entries in all blanks in the Bid Form, or inclusion by the Bidder of any alternates, conditions, limitations or provisions not called for.
 4. Add Section 4.1.10:
 - a. 4.1.10 - Bids shall include sales and use taxes as stipulated in Document 007300 "Supplementary Conditions."
- B. 4.2 – Bid Security
1. 4.2.1: Modify the second sentence to read:
 - a. Should the Bidder fail to enter into such Contract within 10 days of issuance by the Owner or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty.
 2. 4.2.2: Revise Section as follows:
 - a. Bid Security shall be in the form of (1) Cash; (2) Cashier's Check; (3) Certified Check on a Bond or Trust Company insured by the Federal Deposit Insurance Corporation, or (4) a Bid Bond executed by a Corporate Surety licensed under the laws of the State of North Carolina to execute such bonds. A company check will not be accepted as a form of Bid Security.
- C. 4.3 - Submission of Bids:
1. 4.3.1: Modify the second sentence to read:
 - a. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Project number, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted.
 2. Add Section 4.3.1.2:
 - a. 4.3.1.2 - Include Bidder's Contractor License Number applicable in Project jurisdiction on the face of the sealed bid envelope.
- D. 4.4 - Modification or Withdrawal of Bids:
1. Add the following sections to 4.4.2:

- a. 4.4.2.1 - Such modifications to or withdrawal of a bid may only be made by persons authorized to act on behalf of the Bidder. Authorized persons are those so identified in the Bidder's corporate bylaws, specifically empowered by the Bidder's charter or similar legally binding document acceptable to Owner, or by a power of attorney, signed and dated, describing the scope and limitations of the power of attorney. Make such documentation available to Owner at the time of seeking modifications or withdrawal of the Bid.
- b. 4.4.2.2 - Owner will consider modifications to a bid written on the sealed bid envelope by authorized persons when such modifications comply with the following: the modification is indicated by a percent or stated amount to be added to or deducted from the Bid; the amount of the Bid itself is not made known by the modification; a signature of the authorized person, along with the time and date of the modification, accompanies the modification.

E. 4.5 - Break-Out Pricing Bid Supplement:

1. Add Section 4.5:

- a. 4.5 - Provide detailed cost breakdowns [on forms provided] no later than two business days following Architect's request.

F. 4.6 - Subcontractors, Suppliers, and Manufacturers List Bid Supplement:

1. Add Section 4.6:

- a. 4.6 - Provide list of major subcontractors, suppliers, and manufacturers furnishing or installing products [on forms provided] no later than [two] <Insert number> business days following Architect's request. Include those subcontractors, suppliers, and manufacturers providing work totaling [three] <Insert number> percent or more of the Bid amount. Do not change subcontractors, suppliers, and manufacturers from those submitted without approval of Architect.

1.6 ARTICLE 5 - CONSIDERATION OF BIDS

A. 5.2 - Rejection of Bids:

1. Add Section 5.2.1:

- a. 5.2.1 - Owner reserves the right to reject a bid based on Owner's and Architect's evaluation of qualification information submitted following opening of bids. Owner's evaluation of the Bidder's qualifications will include: status of licensure and record of compliance with licensing requirements, record of quality of completed work, record of Project completion and ability to complete, record of financial management including financial resources available to complete Project and record of timely payment of obligations, record of Project site management including compliance with requirements of authorities having jurisdiction, record of and number of current claims and disputes and the status of their resolution, and qualifications of the Bidder's proposed Project staff and proposed subcontractors.

B. Add Section 5.4:

1. 5.4 Determination Of Lowest Responsible Bid

- a. 5.4.1 The Owner will have the right to take such steps as he deems necessary to determine the ability of the Bidder to perform the Work, and the Bidder shall furnish to the Owner such data for this purpose as the Owner may request.
- b. 5.4.2 In determining which bid is the lowest responsible bid, the Owner may take into consideration not only the amount of the bid but such of the following criteria as it, in its discretion, deems appropriate and may give such weight thereto as it deems appropriate:

- 1) a) The Bidder's financial ability to complete the Contract successfully without resort to its Surety.
- 2) b) The Bidder's prior experience with similar work on comparable or more complex projects.
- 3) c) The Bidder's prior history for the successful and timely completion of projects.
- 4) d) The Bidder's equipment and facilities.
- 5) e) The adequacy, in numbers and experience, of the Bidder's work force to complete the Contract successfully and on time.
- 6) f) The Bidder's prior experience on other projects of the Owner, including the bidder's demonstrated ability to complete its work on these projects in accordance with the Contract Documents and on time. The Owner reserves the right to consider as not responsible (and therefore unacceptable) any contractor or subcontractor presently in litigation with the Union County Board of Education. The Owner reserves the right to consider a Bidder on the State or Federal Debarred List as not responsible.
- 7) g) The Bidder's history of compliance with federal, state, and local laws, rules, and regulations.
- 8) h) Depending upon the type of the work, other essential factors.

- 2. 5.4.3 The failure to submit requested information on a timely basis may result in the determination that the bidder is not responsible.
- 3. 5.4.4 In the case of a tie for low bid (based upon base bid only) the Alternates (whether or not accepted at time of award) and (if necessary) Unit Prices, shall also be used to determine the low Bidder.
- 4. 5.4.5 Out-of-state bidders shall research and become fully aware of the specific requirements with regard to licensing requirements for out-of-state Contractors proposing to do work in the state of North Carolina. Simple agreements with state licensed contractors, to hire them or pay them a fee for use of their license, may not be acceptable or compliant. Care should be taken when establishing joint contracts to bid and perform construction activities within the state of North Carolina. If not identified and corrected prior to bidding/award and non-compliant bidders are awarded contracts, the costs involved to make Contractors compliant shall be borne by that Contractor and shall not be cause for a change order for additional costs.

1.7 ARTICLE 6 - POSTBID INFORMATION

A. 6.1 - Contractor's Qualification Statement:

- 1. Add Section 6.1.1:

- a. 6.1.1 - Submit Contractor's Qualification Statement no later than [two] <Insert number> business days following Architect's request.

B. 6.3 - Submittals:

1. Add Section 6.3.1.4:

- a. 6.3.1.4 - Submit information requested in Sections 6.3.1.1, 6.3.1.2, and 6.3.1.3 no later than [two] <Insert number> business days following Architect's request.

1.8 ARTICLE 7 - PERFORMANCE BOND AND PAYMENT BOND

A. 7.1 - Bond Requirements:

1. 7.1.1: Modify the second sentence to read:

- a. Bonds may be secured in the form of (1) Cash; (2) Cashier's Check; (3) Certified Check on a Bond or Trust Company insured by the Federal Deposit Insurance Corporation, or (4) a Bond executed by a Corporate Surety licensed under the laws of the State of North Carolina to execute such bonds. A company check will not be accepted as a form of Performance and Payment Bond.

2. Add Section 7.1.1.1:

- a. 7.1.1.1 - Both a Performance Bond and a Payment Bond will be required, each in an amount equal to 100 percent of the Contract Sum.

B. 7.2 - Time of Delivery and Form of Bonds:

1. Delete the first sentence of Section 7.2.1 and insert the following:

- a. The Bidder shall deliver the required bonds to Owner no later than [10] <Insert number> days after the date of Notice of Intent to Award and no later than the date of execution of the Contract, whichever occurs first. Owner may deem the failure of the Bidder to deliver required bonds within the period of time allowed a default.

2. Delete Section 7.2.3 and insert the following:

- a. 7.2.3 - Bonds shall be executed and be in force on the date of the execution of the Contract.

1.9 ARTICLE 9 - EXECUTION OF THE CONTRACT

A. Add Article 9:

1. 9.1.1 - Subsequent to the Notice of Intent to Award, and within [10] days after the prescribed Form of Agreement is presented to the Awardee for signature, the Awardee shall execute and deliver the Agreement to Owner through Architect, in such number of counterparts as Owner may require.

2. 9.1.2 - Owner may deem as a default the failure of the Awardee to execute the Contract and to supply the required bonds when the Agreement is presented for signature within the period of time allowed.
3. 9.1.3 - Unless otherwise indicated in the Bidding and Contracting Documents or the executed Agreement, the date of commencement of the Work shall be the date of the executed Agreement[or the date that the Bidder is obligated to deliver the executed Agreement and required bonds to Owner].
4. 9.1.4 - In the event of a default, Owner may declare the amount of the Bid security forfeited and elect to either award the Contract to the next responsible bidder or re-advertise for bids.

END OF DOCUMENT 002213

SECTION 00 26 00
PROCUREMENT SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Administrative and procedural requirements for handling requests for substitutions prior to the Owner's receipt of bids.

1.2 DEFINITIONS

- A. Definitions used in this Article are not intended to change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions: Requests for changes in products, materials, and equipment, of construction required by Contract Documents proposed by the Contractor are considered requests for substitutions. The following are not considered substitutions:
 - 1. Substitutions that are requested by Bidders beyond the 10 days prior to bid opening submittal period
 - 2. Revisions to Contract Documents requested by the Owner or Architect
 - 3. Specified options of products and construction methods included in Contract Documents
 - 4. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities

1.3 SUBSTITUTION REQUEST

- A. Request for substitution from Bidders, submitted Bid as General Contractor will be considered if received by the Architect a minimum of 10 days prior to receipt of Bids.
 - 1. Submit three (3) copies of each request for substitution for consideration.
 - 2. Identify the product or method to be replaced in each request. Include reference to related Specification Sections and drawing sheet number.
 - 3. Provide complete documentation on both the product specified and the proposed substitution including the following information as appropriate.
 - a. Comparison of specified and proposed substitute product data, fabrication drawings, and installation procedures.
 - b. Samples where applicable or requested.
 - c. A detailed comparison of significant qualities of the proposed substitution with those of the work specified.
 - d. Coordination information, including a list of changes or modifications

required to other parts of the Work and to construction performed by others that will become necessary to accommodate the proposed substitution.

4. Certification by the Bidder or the manufacturer that the proposed substitution is equal-to or better in every respect to that required by the proposed Contract Documents and that it will perform equal-to or superior to product specified in the application indicated. The Contractor waives any right to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.
- B. Architect's Action: The Architect may request additional information or documentation necessary for evaluation of the request. The Architect will notify Bidders of acceptance of the proposed substitution by means of an addendum to the proposed Contract Documents.
- C. Architect's Substitution Approval during bidding and subsequent addenda does not void the Contractor's responsibility to submit the required shop drawings and comply with the requirements of the Contract Documents.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. The Architect will consider Bidder's substitution request when the following conditions are satisfied, as determined by the Architect; otherwise, requests will be returned without action except to record noncompliance with these requirements.
1. Extensive revisions to Contract Documents are not required.
 2. Proposed changes are in keeping with the general intent of Contract Documents.
 3. The request is timely, fully documented and properly submitted.
 4. The request is directly related to an "or equal" clause or similar language in the Contract Documents.

PART 3 – EXECUTION (NOT USED)

END OF SECTION 00 26 00

**SECTION 00 31 13
PRELIMINARY SCHEDULE**

Pre-Construction		
Pre-Construction	Start	Finish
Construction Bid Advertisement	December 2023	
Pre-Bid Meeting	January 4, 2024	
Receive Bids	January 18, 2024	
UCPS Board Approval	February 2024	
◆ Issue Notice to Proceed	March 2024	
Construction Period		
◆ Milestone 1 (rename as necessary/delete as necessary)		
◆ Milestone 2 (rename as necessary/delete as necessary)		
◆ Milestone 3 (rename as necessary/delete as necessary)		
◆ Milestone 4 (rename as necessary/delete as necessary)		
◆ Substantial Completion		
◆ Final Completion		
☒ = Contractor milestone completion dates.		

END OF SECTION



WOLF TRAIL™
ENGINEERING
NC P-1817 | SC 5872

Mr. Maurice Brown
Construction Project Manager
UCPS Facilities Department
201 Venus Street
Monroe, NC 28112

Subject: Roof Renovation at Monroe High School

Dear, Mr. Brown:

On May 5th, 2023, our team performed a roof take-off and audit for the proposed roof areas for this project. There were no suspected ACM's in the area of the current scope of work.

Regards,

Chris Tucker

Chris Tucker | Project Manager
North Carolina Asbestos Accredited Inspector # 13312
chris@wolftrailengineering.com | 704-562-0791

Attach to Bid Attach to Bid

00 41 13

BID FORM STIPULATED SUM (SINGLE-PRIME CONTRACT)

PROJECT: 2023-UCPS-R-3-Monroe High School Roof Renovation Project

LOCATION: 1 High School Dr, Monroe, NC 28112

SPECIFICATION DATE: October 2023

CONTRACTOR: _____

ADDRESS: _____

(Telephone w/Area Code) _____

DATE: _____

LICENSE/LIMITS: _____

NC LICENSE NUMBER: _____

INSURANCE CARRIER: _____

PRICE FOR WORK INCLUDED IN THE BID DOCUMENTS AND AS
OUTLINED IN THE SCOPE OF WORK:

BASE BID OF ROOF AREAS: (01.26 Section B, 02.02, 02.03, 02.07, 02.08, 02.09, +
contingency)

BASE BID: (PVC Re-cover) \$ _____

Having visited the site of proposed Work and checked all dimensions of areas included in the
Scope of Work, our composite Lump Sum includes approximately.

AREA OF BASE BID: _____square feet

TIME TO COMPLETION IN CALENDAR DAYS BASE BID _____

Time to completion may be considered in the award of the Contract.

We understand the requirements of the Specifications and Drawings for the project.

We acknowledge receipt of the following addenda to the Specifications (if none received, so
state):

Prebid Meeting Minutes: _____

Addendum #1: _____

Addendum #2: _____

00 43 13
FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS THAT _____
_____ as
principal, and _____, as surety, who is
duly licensed to act as surety in North Carolina, are held and firmly bound unto the State of
North Carolina* through _____ as
obligee, in the penal sum of _____ DOLLARS, lawful money of
the United States of America, for the payment of which, well and truly to be made, we bind
ourselves, our heirs, executors, administrators, successors and assigns, jointly and
severally, firmly by these presents.

Signed, sealed, and dated this ____ day of _____ 202

WHEREAS the said principal is herewith submitting proposal for
and the principal desires to file this bid bond in lieu of making the cash deposit as required
by G.S. 143-129.

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION is such, that
if the principal shall be awarded the contract for which the bid is submitted and shall
execute the contract and give bond for the faithful performance thereof within ten days after
the award of same to the principal, then this obligation shall be null and void; but if the
principal fails to so execute such contract and give performance bond as required by G.S.
143-129, the surety shall, upon demand, forthwith pay to the obligee the amount set forth in
the first paragraph hereof. Provided further, that the bid may be withdrawn as provided by
G.S. 143-129.1

_____(SEAL)

_____(SEAL)

_____(SEAL)

_____(SEAL)

_____(SEAL)

Attach AFFIDAVIT A or AFFIDAVIT B to the Bid

State of North Carolina AFFIDAVIT A – Listing of the Good Faith Effort

County of _____

Affidavit of _____
(Name of Bidder)

I have made a good faith effort to comply under the following areas checked:

Bidder must earn at least 50 points from the Good Faith Efforts list for their bid to be considered responsive.

- 1 – (10 Points)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- 2 – (10 Points)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- 3 - (15 Points)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- 4 – (10 Points)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- 5 – (10 Points)** Attended pre-bid meetings scheduled by the public owner.
- 6 – (20 Points)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- 7 – (15 Points)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- 8 – (25 Points)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- 9 - (20 Points)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- 10 – (20 Points)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

In accordance with GS143-128.2(d) and Board of Education Policy the undersigned will enter into a formal agreement with the firms listed in the Identification of Minority, Women, and Small Business Participation schedule conditional upon execution of a contract with the Owner. Failure to abide by this statutory provision will constitute a breach of the contract. The undersigned hereby certifies that he or she has read the terms of the Minority, Women, and Small Business Enterprise commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____

Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____ County _____

Subscribed and sworn to before me this _____ day of _____ 20 _____

Notary Public _____ My commission expires _____

Attach AFFIDAVIT A or AFFIDAVIT B to the Bid

State of North Carolina

**--AFFIDAVIT B-- Intent to Perform Contract
with Own Workforce.**

County of _____

Affidavit of _____

(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____
_____ contract.

(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform **all elements of the work** on this project with his/her own current work forces; **AND** the bidder will not purchase any materials or supplies in the performance of the contract

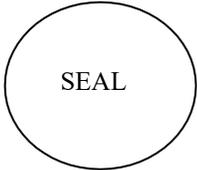
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20

Notary Public _____

My commission expires _____

State of North Carolina --- AFFIDAVIT C --- Portion of the Work to be Performed by M/W/SBE Firms

County of _____

**** (NOTE: THIS FORM IS TO BE SUBMITTED ONLY BY THE APPARENT LOWEST RESPONSIVE BIDDER) ****

If the portion of the work to be executed by M/WBE firms as defined in GS143-128.2(g) and Board of Education M/W/SBE Policy is equal to or greater than the M/W/SBE aspirational goal of MBE 10%, WBE 6%, and SBE 5% in **Construction**, and/or MBE 5%, WBE 4%, and SBE 5% in **Other Services** and/or MBE 3%, WBE 3%, and SBE 5% in **Goods** participation of the bidders total contract price, then the bidder must complete this affidavit. This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being the **apparent low** bidder.

Affidavit of _____ I do hereby certify that on the _____
 (Name of Bidder)

(Project Name)

Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority, women, or small business enterprises. M/W/SBEs will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. Attach additional sheets if required

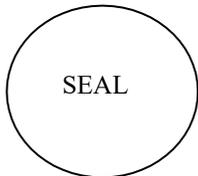
Name and Address	*M/W/SBE Category	Work description	Dollar Value

*M/W/SBE categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) Native American Indian (**N**), Female (**F**) Socially and Economically Disadvantaged (**D**), Small (**S**)

In accordance with GS143-128.2(d) and Board of Education Policy the undersigned will enter into a formal agreement with the firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of contract. The undersigned hereby certifies that he or she has read the terms of the Minority, Women, and Small Business Enterprise commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____
 Title: _____
 State of _____, County of _____



Subscribed and sworn to before me this _____ day of _____ 20____
 Notary Public _____
 My commission expires _____

State of North Carolina

AFFIDAVIT D – Good Faith Efforts

Project: _____ **County of** _____

If the aspirational goal of MBE 10%, WBE 6%, and SBE 5% in **Construction**, and/or MBE 5%, WBE 4%, and SBE 5% in **Other Services** and/or MBE 3%, WBE 3%, and SBE 5% in **Goods** participation by M/W/SBE businesses **is not** achieved, the apparent lowest responsible, responsive bidder shall provide the following documentation to the Owner of his good faith efforts **and** the M/W/SBE firms that **will** be used on the project. This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being the **apparent low** bidder.

(Name of Bidder)

Affidavit of: _____

I do certify the attached documentation as true and accurate representation of my good faith efforts.

I will expend a minimum of _____% of the total dollar amount of the contract with minority, women, or small business enterprises. M/W/SBEs will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below.

Attach additional sheets if required

Name and Address	*M/W/SBE Category	Work description	Dollar Value

*M/W/SBE categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**), Small (**S**)

Documentation of the Bidder's good faith efforts to meet the goals set forth in these provisions. Examples of documentation include, but are not limited to, the following evidence:

- A. Copies of solicitations for quotes to at least three (3) M/W/SBE firms from the source list provided by the State for each subcontract to be let under this contract. Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- G. Letter detailing reasons for rejection of minority business due to lack of qualification.
- H. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

Date: _____ **Name of Authorized Officer:** _____

Signature: _____

Title: _____

State of _____, County of _____

Subscribed and sworn to before me this _____ day of _____ 20

Notary Public _____ My commission expires _____



****This document must be submitted with each pay request & final payment****

APPENDIX E

MBE DOCUMENTATION FOR CONTRACT PAYMENTS

Prime Contractor/Architect: _____

Address & Phone: _____

Project Name: _____

Pay Application #: _____ Period: _____

The following is a list of payments to be made to minority business contractors on this project for the above-mentioned period.

MBE FIRM NAME	* INDICATE TYPE OF MBE	AMOUNT PAID THIS MONTH	TOTAL PAYMENTS TO DATE	TOTAL AMOUNT COMMITTED

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

Date: _____

Approved/Certified By: _____
Name

Title

Signature

Signature certifies that any minority firms not previously verified in the bid/award process have been appropriately verified, services have been rendered, and payment is due as processed.

SECTION 00 60 00
PROJECT FORMS

PART 1 - GENERAL

1.1 FORMS

A. The following documents are hereby incorporated into the Contract Documents by reference:

1. AIA Document G701 – Change Order Form, 2001 Edition
2. AIA Document G702, Application and Certificate for Payment, and
3. AIA Document G703, Continuation Sheet, 1992 Edition
4. AIA Document G704, Certificate of Substantial Completion, 2000 Edition
5. AIA Document G706, Contractor’s Affidavit of Payment of Debts and Claims, 1994 Edition
6. AIA Document G706A, Contractor’s Affidavit of Payment of Release of Liens, 1994 Edition
7. AIA Document G707, Consent of Surety to Final Payment, 1994 Edition
8. AIA Document G707A, Consent of Surety to Reduction in or Partial Release of Retainage, 1994 Edition
9. AIA Document G709 – Proposal Request, 2001 Edition
10. AIA Document G710 Architect’s Supplemental Instruction Form, 1992 Edition
11. AIA Document G714 Construction Change Directive, 2007 Edition
12. Certificate of Insurance (Accord form 25S with changes)

B. The following documents are included in the Project Manual:

1. Bid Security Form, Owner’s Form (Document 00 43 13)
2. Performance Bond Form, Owner’s Form (Document 00 61 13.13)
3. Payment Bond Form, Owner’s Form (Document 00 61 13.16)
4. Roofing Manufacturer’s Acknowledgement (Document 00 62 33)
5. State/County Sales/Use Tax Statement and Certification (Document 00 62 76.13)
6. Change Order Form (Document 00 63 63)
7. Certification of Asbestos-Free Compliance, Owner's Form (Document 00 65 14)
8. Warranty Form, Owner's Form (Document 00 65 36)
9. Roofing Warranty Form, Owner's Form (Document 00 65 37)

C. Copies of standard The American Institute of Architects (AIA) documents cited above are available from The American Institute of Architects, 1735 New York Avenue, NW, Washington, DC 20006 or from local AIA offices.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION 00 60 00

SECTION 00 61 13.13
PERFORMANCE BOND

Date of Execution of
this bond

Name and Address of
Principal (Bidder)

Name and Address
of Surety

Name and Address of
Contracting Body

Union County Board of Education
a body corporate of the State of North Carolina
400 North church St
Monroe, NC 28112

Amount of Bond

Contract
abovenamed dated

That certain contract by and between the Principal and the Contracting Body

_____ for _____

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL and SURETY above named, are held and firmly bound unto the above-named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successor, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal entered into a certain contract, with the Contracting Body, identified as shown above and hereto attached;

NOW THEREFORE, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Contracting Body, with or without notice of the Surety, and during the life of any guarantee required under the contract, and shall also well and truly perform and fulfil all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of the contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then, this obligation to be void; otherwise, to remain in full force and virtue.

THIS PERFORMANCE BOND is made and given pursuant to the requirements and provisions of Section 129 of Chapter 143 of the General Statutes of North Carolina and pursuant to Article 3 of Chapter 44-A of the General Statutes of North Carolina, and each and every provision set forth and contained in Article 3 of Chapter 44-A of the General Statutes of North Carolina is incorporated herein, made a part hereof, and deemed to be conclusively written into this Bond.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals of the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned and representative, pursuant to authority of its governing body.

WITNESS:

Principal (Name of individual, and trade Name, partnership, corporation, or jointventure)

(Proprietorship or Partnership)

BY _____ (Seal)

TITLE _____
(Owner, Partner, Office held in corporation, joint venture)

(Corporate Seal)

ATTEST (Corporation)

BY _____

TITLE _____
(Corporation Secretary or Assistant Secretary Only)

Surety (Name of Surety Co.)

WITNESS:

BY _____

TITLE _____ Attorney in Fact

(Corporate Seal of Surety)

(Address of Attorney in Fact)

COUNTERSIGNED:

N.C. Licensed Resident Agent

SECTION 00 61 13.16
PAYMENT BOND

Date of Execution of
this bond

Name and Address of
Principal (Bidder)

Name and Address
of Surety

Name and Address of
Contracting Body

Amount of Bond

Contract

That certain contract by and between the Principal and the Contracting Body
abovenamed dated

_____ for _____

KNOW ALL MEN BY THESE PRESENTS, that we, the PRINCIPAL and SURETY above named, are held and firmly bound unto the above-named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successor, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal entered into a certain contract with the Contracting Body, identified as shown above and hereto attached;

NOW THEREFORE, if the Principal shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications and extensions of time of said contract may be here-after be made, notice of which modification and extension of time to the Surety being hereby waived, then this obligation to be void; otherwise, to remain in full force and virtue.

THIS PAYMENT BOND is made and given pursuant to the requirements and provisions of Section 129 of Chapter 143 of the General Statutes of North Carolina and pursuant to Article 3 of Chapter 44-A of the General Statutes of North Carolina, and each and every provision set forth and contained in Article 3 of Chapter 44-A of the General Statutes of North Carolina is incorporated herein, made a part hereof, and deemed to be conclusively written into this Bond.

IN WITNESS WHEREOF, the above-bounded parties have executed this instrument under their several seals of the date indicated above, the name and corporate seal of each corporate party being hereto affixed, and these presents duly signed by its undersigned and representative, pursuant to authority of its governing body.

WITNESS:

(Proprietorship or Partnership)

Principal (Name of individual, and trade Name, partnership, corporation, or jointventure)

BY _____ (Seal)

TITLE _____
(Owner, Partner, Office held in corporation, joint venture)

(Corporate Seal)

ATTEST _____ (Corporation)
BY _____

TITLE _____
(Corporation Secretary or Assistant Secretary Only)

Surety (Name of Surety Co.)

WITNESS:

BY _____

TITLE _____ Attorney in Fact

(Corporate Seal of Surety)

(Address of Attorney in Fact)

COUNTERSIGNED:

N.C. Licensed Resident Agent

SECTION 00 62 33

ROOF MANUFACTURER'S ACKNOWLEDGMENT

Owner:

Project Name:

Address:

Roofing Contractor: _____

Address: _____

Telephone: _____

This is to advise the Owner that having thoroughly reviewed the Specifications and Drawings contained within the Project Manual dated _____ for the above-titled project, we acknowledge that the roof system(s) and flashing system(s) specified are suitable for the issuance of the specified Manufacturer's warranty on this project and have been tested and approved for the wind uplift pressures outlined in the project specifications. Having reviewed the project requirements in detail, the Manufacturer will provide a written response of exceptions to the Engineer through the contractor before five (5) days of the bid due date or as otherwise outlined in the Instructions to Bidders, if conflicts exist between the Manufacturer's warranty requirements and the above listed documents. Exceptions not submitted accordingly are subject to rejection. The manufacturer also certifies that the installer is approved, authorized, or licensed by the manufacturer to install the specified roof system and is eligible to provide the specified manufacturer's warranty. The manufacturer will comply with the specified requirements for on-site technical support.

_____ is hereby designated as our Liaison on this project.

(Print or type name of Liaison)

Telephone

Facsimile

Roof Manufacturer's Company Name

Roof Manufacturer Representative's Signature

Date

Roof Manufacturer Representative's Name

Title

Roof Manufacturer's Address

Telephone

Facsimile

END OF SECTION 00 62 33

SECTION 00 62 76.13
STATE AND COUNTY SALES/USE TAX STATEMENT AND CERTIFICATION

STATE OF NORTH CAROLINA
COUNTY SALES AND USE TAX REPORT
SUMMARY TOTALS AND CERTIFICATION

CONTRACTOR: _____

Page 1 of

PROJECT: _____

FOR PERIOD: _____

	TOTAL FOR COUNTY OF:	TOTAL ALL COUNTIES					
CONTRACTOR							
SUBCONTRACTOR(S)*							
COUNTY TOTAL							

* Attach subcontractor(s) report(s)
** Must balance with Detail Sheet(s)

I certify that the above figures do not include any tax paid on supplies, tools and equipment which were used to perform this contract and only includes those building materials, supplies, fixtures and equipment which actually became a part of or annexed to the building or structure. I certify that, to the best of my knowledge, the information provided here is true, correct, and complete.

Sworn to and subscribed before me,

This the _____ day of _____, 20____

Signed

Notary Public

My Commission Expires: _____

Print or Type Name of Above

Seal

NOTE:
This certified statement may be subject to audit.

STATE OF NORTH CAROLINA

SALES AND USE TAX REPORT DETAIL

CONTRACTOR: _____

Page _____ of _____

SUBCONTRACTOR _____

FOR PERIOD: _____

PROJECT: _____

PURCHASE DATE	VENDOR NAME	INVOICE NUMBER	TYPE OF PROPERTY	INVOICE TOTAL	COUNTY TAX PAID	COUNTY OF SALE *
				\$	\$	
				TOTAL:	\$	

* If this is an out-of-state vendor, the County of Sale should be the county to which the merchandise was shipped.


AIA Document G701™ – 2017

Change Order

PROJECT: *(Name and address)*
CONTRACT INFORMATION:

Contract For:

Date:

CHANGE ORDER INFORMATION:

Change Order Number:

Date:

OWNER: *(Name and address)*
ARCHITECT: *(Name and address)*
CONTRACTOR: *(Name and address)*
THE CONTRACT IS CHANGED AS FOLLOWS:
(Insert a detailed description of the change and, if applicable, attach or reference specific exhibits. Also include agreed upon adjustments attributable to executed Construction Change Directives.)

The original Contract Sum was	\$	_____	0.00
The net change by previously authorized Change Orders	\$	_____	0.00
The Contract Sum prior to this Change Order was	\$	_____	0.00
The Contract Sum will be increased by this Change Order in the amount of	\$	_____	0.00
The new Contract Sum including this Change Order will be	\$	_____	0.00

The Contract Time will be increased by Zero (0) days.

The new date of Substantial Completion will be

NOTE: This Change Order does not include adjustments to the Contract Sum or Guaranteed Maximum Price, or the Contract Time, that have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

ARCHITECT *(Firm name)*

CONTRACTOR *(Firm name)*

OWNER *(Firm name)*

SIGNATURE

SIGNATURE

SIGNATURE

PRINTED NAME AND TITLE

PRINTED NAME AND TITLE

PRINTED NAME AND TITLE

DATE

DATE

DATE

SECTION 00 65 14
CERTIFICATION OF ASBESTOS-FREE COMPLIANCE

PROJECT NAME: _____

PROJECT DESCRIPTION: _____

UNION COUNTY, NORTH CAROLINA

The undersigned Contractor hereby certifies that no asbestos-containing materials of any kind were used in the construction of _____, at _____ North Carolina.

Signed: _____

Name: _____

Title: _____

Date: _____

(Corporate Seal)

Subscribed and sworn before me this

_____ day of _____, 20__

(Notary Public)

END OF DOCUMENT

SECTION 00 65 36
WARRANTY FORM

PROJECT NAME: _____

PROJECT DESCRIPTION: _____

UNION COUNTY, NORTH CAROLINA

The undersigned Contractor hereby warrants, in accordance with the applicable provisions and terms set forth in the Contract Documents, all materials and workmanship incorporated in the _____ contract of the _____ Building, _____, Union County, North Carolina, against any and all defects due to faulty materials or workmanship or negligence for a period of twenty-four (24) months, or such longer periods as set forth in the Contract Documents, from the effective date **of this warranty**(_____) **as defined by the date of substantial completion** . This warranty supersedes any and all dates listed in the enclosed subcontractor warranties thus honoring warranty work two years from the date of substantial completion listed here. This contractor further warrants all work incorporated in this project to remain leakproof and watertight at all points for a period of twenty-four (24) months from the effective date of this Warranty.

This Warranty shall be binding where defects occur due to normal usage conditions and does not cover willful or malicious damage, damage caused by acts of God or other casualties beyond the control of the Contractor.

This Warranty shall be in accordance to other warranties and guarantees set forth in the Contract Documents, and shall not act to constitute a waiver of additional protection of the Owner afforded, where applicable, by consumer protection and product liability provisions of law, and these stipulations shall not constitute waiver of any additional rights or remedies available to the Owner under the law.

Date of Substantial Completion: _____

Signed: _____

Name: _____

Title: _____

Date: _____

(Corporate Seal)

Subscribed and sworn before me this

_____ day of _____, 20__

(Notary Public)

DOCUMENT 00 65 37
ROOFING WARRANTY FORM

PROJECT NAME: _____

PROJECT DESCRIPTION: _____

UNION COUNTY, NORTH CAROLINA

KNOW ALL MEN BY THESE PRESENTS, that we, (_____) having installed roofing, flashing, and sheet metal work on Monroe High School under contract between Union County Public Schools and _____, warrant to Union County Public Schools with respect to said work that for a period of two (2) years from date of Substantial Completion of said Work by _____, the roofing membrane, flashing, and sheet metal work shall be watertight and free from all leaks, provided however, the following are excluded from this warranty:

- a) Defects or failures resulting from abuse by the Owner.
- b) Defects in design involving failure of (1) structural frame, (2) load bearing walls, and (3) foundations.
- c) Damages caused by fire, tornado, hail, hurricane, acts of God, wars, vandalism, riots, or civil commotion.

We, (____), agree that should any leaks occur in the roofing system we will perform emergency repairs within twenty-four (24) hours' notice and perform permanent repairs within thirty (30) days in a manner to restore the roof to a watertight condition by methods such as to restore the work to a condition comparable to that at date of final acceptance, all at no expense to the Owner.

We (____), further agree that for a period of two (2) years from date of final acceptance referred above, we will make repairs at no expense to the Owner, to any defects which may develop in the work, including but not limited to blisters, wrinkles, fish-mouths, ridges, splits, warped insulation, loose flashing, in such a way as to restore the work to a condition comparable to that at date of final acceptance.

This two (2) year warranty shall be extended one (1) day for each day there has been an established leak and the leak goes without being successfully corrected.

IN WITNESS WHEREOF, we have caused this instrument to be duly executed this _____ day of ____ 20____.

(Contractor)

(Seal if a corporation)

BY: _____

(President)

WITNESS:

(Notary Public)

END OF DOCUMENT 00 65 37



AIA[®] Document A201[™] – 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

Address
Street
City, State, Zip

THE OWNER:

(Name, legal status and address)

Name
Address

THE ARCHITECT:

(Name, legal status and address)

Wolf Trail Engineering
1001 Lancaster Av
Monore, NC 28112

TABLE OF ARTICLES

- | | |
|----|---|
| 1 | GENERAL PROVISIONS |
| 2 | OWNER |
| 3 | CONTRACTOR |
| 4 | ARCHITECT |
| 5 | SUBCONTRACTORS |
| 6 | CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS |
| 7 | CHANGES IN THE WORK |
| 8 | TIME |
| 9 | PAYMENTS AND COMPLETION |
| 10 | PROTECTION OF PERSONS AND PROPERTY |
| 11 | INSURANCE AND BONDS |
| 12 | UNCOVERING AND CORRECTION OF WORK |
| 13 | MISCELLANEOUS PROVISIONS |
| 14 | TERMINATION OR SUSPENSION OF THE CONTRACT |
| 15 | CLAIMS AND DISPUTES |

This document has important legal consequences.

Consultation with an attorney is encouraged with respect to its completion or modification.

For guidance in modifying this document to include supplementary conditions, see AIA Document A503[™], Guide for Supplementary Conditions.

Init.

INDEX

(Topics and numbers in bold are Section headings.)

Acceptance of Nonconforming Work9.6.6, 9.9.3, **12.3**

Acceptance of Work

9.6.6, 9.8.2, 9.9.3, 9.10.1, 9.10.3, 12.3

Access to Work**3.16**, 6.2.1, 12.1

Accident Prevention

10

Acts and Omissions

3.2, 3.3.2, 3.12.8, 3.18, 4.2.3, 8.3.1, 9.5.1, 10.2.5,

10.2.8, 13.3.2, 14.1, 15.1.2, 15.2

Addenda

1.1.1

Additional Costs, Claims for

3.7.4, 3.7.5, 10.3.2, 15.1.5

Additional Inspections and Testing9.4.2, 9.8.3, 12.2.1, **13.4****Additional Time, Claims for**3.2.4, 3.7.4, 3.7.5, 3.10.2, 8.3.2, **15.1.6****Administration of the Contract**3.1.3, **4.2**, 9.4, 9.5

Advertisement or Invitation to Bid

1.1.1

Aesthetic Effect

4.2.13

Allowances**3.8****Applications for Payment**4.2.5, 7.3.9, 9.2, **9.3**, 9.4, 9.5.1, 9.5.4, 9.6.3, 9.7, 9.10

Approvals

2.1.1, 2.3.1, 2.5, 3.1.3, 3.10.2, 3.12.8, 3.12.9,

3.12.10.1, 4.2.7, 9.3.2, 13.4.1

Arbitration8.3.1, 15.3.2, **15.4****ARCHITECT****4****Architect**, Definition of**4.1.1**

Architect, Extent of Authority

2.5, 3.12.7, 4.1.2, 4.2, 5.2, 6.3, 7.1.2, 7.3.4, 7.4, 9.2,
9.3.1, 9.4, 9.5, 9.6.3, 9.8, 9.10.1, 9.10.3, 12.1, 12.2.1,
13.4.1, 13.4.2, 14.2.2, 14.2.4, 15.1.4, 15.2.1Architect, Limitations of Authority and
Responsibility2.1.1, 3.12.4, 3.12.8, 3.12.10, 4.1.2, 4.2.1, 4.2.2,
4.2.3, 4.2.6, 4.2.7, 4.2.10, 4.2.12, 4.2.13, 5.2.1, 7.4,
9.4.2, 9.5.4, 9.6.4, 15.1.4, 15.2

Architect's Additional Services and Expenses

2.5, 12.2.1, 13.4.2, 13.4.3, 14.2.4

Architect's Administration of the Contract

3.1.3, 3.7.4, 15.2, 9.4.1, 9.5

Architect's Approvals

2.5, 3.1.3, 3.5, 3.10.2, 4.2.7

Architect's Authority to Reject Work

3.5, 4.2.6, 12.1.2, 12.2.1

Architect's Copyright

1.1.7, 1.5

Architect's Decisions

3.7.4, 4.2.6, 4.2.7, 4.2.11, 4.2.12, 4.2.13, 4.2.14, 6.3,
7.3.4, 7.3.9, 8.1.3, 8.3.1, 9.2, 9.4.1, 9.5, 9.8.4, 9.9.1,
13.4.2, 15.2

Architect's Inspections

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.8.3, 9.9.2, 9.10.1, 13.4

Architect's Instructions

3.2.4, 3.3.1, 4.2.6, 4.2.7, 13.4.2

Architect's Interpretations

4.2.11, 4.2.12

Architect's Project Representative

4.2.10

Architect's Relationship with Contractor

1.1.2, 1.5, 2.3.3, 3.1.3, 3.2.2, 3.2.3, 3.2.4, 3.3.1, 3.4.2,
3.5, 3.7.4, 3.7.5, 3.9.2, 3.9.3, 3.10, 3.11, 3.12, 3.16,
3.18, 4.1.2, 4.2, 5.2, 6.2.2, 7, 8.3.1, 9.2, 9.3, 9.4, 9.5,
9.7, 9.8, 9.9, 10.2.6, 10.3, 11.3, 12, 13.3.2, 13.4, 15.2

Architect's Relationship with Subcontractors

1.1.2, 4.2.3, 4.2.4, 4.2.6, 9.6.3, 9.6.4, 11.3

Architect's Representations

9.4.2, 9.5.1, 9.10.1

Architect's Site Visits

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.5.1, 9.9.2, 9.10.1, 13.4

Asbestos

10.3.1

Attorneys' Fees

3.18.1, 9.6.8, 9.10.2, 10.3.3

Award of Separate Contracts

6.1.1, 6.1.2

**Award of Subcontracts and Other Contracts for
Portions of the Work****5.2****Basic Definitions****1.1**

Bidding Requirements

1.1.1

Binding Dispute Resolution

8.3.1, 9.7, 11.5, 13.1, 15.1.2, 15.1.3, 15.2.1, 15.2.5,
15.2.6.1, 15.3.1, 15.3.2, 15.3.3, 15.4.1

Bonds, Lien

7.3.4.4, 9.6.8, 9.10.2, 9.10.3

Bonds, Performance, and Payment7.3.4.4, 9.6.7, 9.10.3, **11.1.2**, 11.1.3, **11.5****Building Information Models Use and Reliance****1.8**

Building Permit

3.7.1

Capitalization**1.3**

Certificate of Substantial Completion

9.8.3, 9.8.4, 9.8.5

Init.

Certificates for Payment4.2.1, 4.2.5, 4.2.9, 9.3.3, **9.4**, 9.5, 9.6.1, 9.6.6, 9.7, 9.10.1, 9.10.3, 14.1.1.3, 14.2.4, 15.1.4Certificates of Inspection, Testing or Approval
13.4.4Certificates of Insurance
9.10.2**Change Orders**1.1.1, 3.4.2, 3.7.4, 3.8.2.3, 3.11, 3.12.8, 4.2.8, 5.2.3, 7.1.2, 7.1.3, **7.2**, 7.3.2, 7.3.7, 7.3.9, 7.3.10, 8.3.1, 9.3.1.1, 9.10.3, 10.3.2, 11.2, 11.5, 12.1.2**Change Orders**, Definition of
7.2.1**CHANGES IN THE WORK**

2.2.2, 3.11, 4.2.8, 7, 7.2.1, 7.3.1, 7.4, 8.3.1, 9.3.1.1, 11.5

Claims, Definition of

15.1.1Claims, Notice of
1.6.2, 15.1.3**CLAIMS AND DISPUTES**3.2.4, 6.1.1, 6.3, 7.3.9, 9.3.3, 9.10.4, 10.3.3, **15**, 15.4
Claims and Timely Assertion of Claims
15.4.1**Claims for Additional Cost**3.2.4, 3.3.1, 3.7.4, 7.3.9, 9.5.2, 10.2.5, 10.3.2, **15.1.5****Claims for Additional Time**3.2.4, 3.3.1, 3.7.4, 6.1.1, 8.3.2, 9.5.2, 10.3.2, **15.1.6****Concealed or Unknown Conditions, Claims for**
3.7.4

Claims for Damages

3.2.4, 3.18, 8.3.3, 9.5.1, 9.6.7, 10.2.5, 10.3.3, 11.3, 11.3.2, 14.2.4, 15.1.7

Claims Subject to Arbitration
15.4.1**Cleaning Up****3.15**, 6.3

Commencement of the Work, Conditions Relating to

2.2.1, 3.2.2, 3.4.1, 3.7.1, 3.10.1, 3.12.6, 5.2.1, 5.2.3, 6.2.2, 8.1.2, 8.2.2, 8.3.1, 11.1, 11.2, **15.1.5****Commencement of the Work**, Definition of
8.1.2**Communications**3.9.1, **4.2.4**

Completion, Conditions Relating to

3.4.1, 3.11, 3.15, 4.2.2, 4.2.9, 8.2, 9.4.2, 9.8, 9.9.1, 9.10, 12.2, 14.1.2, 15.1.2

COMPLETION, PAYMENTS AND
9

Completion, Substantial

3.10.1, 4.2.9, 8.1.1, 8.1.3, 8.2.3, 9.4.2, 9.8, 9.9.1, 9.10.3, 12.2, 15.1.2

Compliance with Laws

2.3.2, 3.2.3, 3.6, 3.7, 3.12.10, 3.13, 9.6.4, 10.2.2, 13.1, 13.3, 13.4.1, 13.4.2, 13.5, 14.1.1, 14.2.1.3, 15.2.8, 15.4.2, 15.4.3

Concealed or Unknown Conditions

3.7.4, 4.2.8, 8.3.1, 10.3

Conditions of the Contract

1.1.1, 6.1.1, 6.1.4

Consent, Written

3.4.2, 3.14.2, 4.1.2, 9.8.5, 9.9.1, 9.10.2, 9.10.3, 13.2, 15.4.4.2

Consolidation or Joinder
15.4.4**CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**1.1.4, **6****Construction Change Directive**, Definition of
7.3.1**Construction Change Directives**1.1.1, 3.4.2, 3.11, 3.12.8, 4.2.8, 7.1.1, 7.1.2, 7.1.3, **7.3**, 9.3.1.1

Construction Schedules, Contractor's

3.10, 3.11, 3.12.1, 3.12.2, 6.1.3, 15.1.6.2

Contingent Assignment of Subcontracts
5.4, 14.2.2.2**Continuing Contract Performance**
15.1.4**Contract**, Definition of**1.1.2****CONTRACT, TERMINATION OR SUSPENSION OF THE**5.4.1.1, 5.4.2, 11.5, **14**

Contract Administration

3.1.3, 4, 9.4, 9.5

Contract Award and Execution, Conditions Relating to
3.7.1, 3.10, 5.2, 6.1Contract Documents, Copies Furnished and Use of
1.5.2, 2.3.6, 5.3**Contract Documents**, Definition of
1.1.1**Contract Sum**2.2.2, 2.2.4, 3.7.4, 3.7.5, 3.8, 3.10.2, 5.2.3, 7.3, 7.4, **9.1**, 9.2, 9.4.2, 9.5.1.4, 9.6.7, 9.7, 10.3.2, 11.5, 12.1.2, 12.3, 14.2.4, 14.3.2, 15.1.4.2, **15.1.5**, **15.2.5****Contract Sum**, Definition of**9.1**

Contract Time

1.1.4, 2.2.1, 2.2.2, 3.7.4, 3.7.5, 3.10.2, 5.2.3, 6.1.5, 7.2.1.3, 7.3.1, 7.3.5, 7.3.6, 7, 7, 7.3.10, 7.4, 8.1.1, 8.2.1, 8.2.3, 8.3.1, 9.5.1, 9.7, 10.3.2, 12.1.1, 12.1.2, 14.3.2, 15.1.4.2, 15.1.6.1, 15.2.5

Contract Time, Definition of

8.1.1

CONTRACTOR**3**

Contractor, Definition of

3.1, **6.1.2****Contractor's Construction and Submittal Schedules****3.10**, 3.12.1, 3.12.2, 4.2.3, 6.1.3, 15.1.6.2

Contractor's Employees

2.2.4, 3.3.2, 3.4.3, 3.8.1, 3.9, 3.18.2, 4.2.3, 4.2.6, 10.2, 10.3, 11.3, 14.1, 14.2.1.1

Contractor's Liability Insurance**11.1**

Contractor's Relationship with Separate Contractors and Owner's Forces

3.12.5, 3.14.2, 4.2.4, 6, 11.3, 12.2.4

Contractor's Relationship with Subcontractors

1.2.2, 2.2.4, 3.3.2, 3.18.1, 3.18.2, 4.2.4, 5, 9.6.2, 9.6.7, 9.10.2, 11.2, 11.3, 11.4

Contractor's Relationship with the Architect

1.1.2, 1.5, 2.3.3, 3.1.3, 3.2.2, 3.2.3, 3.2.4, 3.3.1, 3.4.2, 3.5.1, 3.7.4, 3.10, 3.11, 3.12, 3.16, 3.18, 4.2, 5.2, 6.2.2, 7, 8.3.1, 9.2, 9.3, 9.4, 9.5, 9.7, 9.8, 9.9, 10.2.6, 10.3, 11.3, 12, 13.4, 15.1.3, 15.2.1

Contractor's Representations

3.2.1, 3.2.2, 3.5, 3.12.6, 6.2.2, 8.2.1, 9.3.3, 9.8.2

Contractor's Responsibility for Those Performing the Work

3.3.2, 3.18, 5.3, 6.1.3, 6.2, 9.5.1, 10.2.8

Contractor's Review of Contract Documents

3.2

Contractor's Right to Stop the Work

2.2.2, 9.7

Contractor's Right to Terminate the Contract

14.1

Contractor's Submittals

3.10, 3.11, 3.12, 4.2.7, 5.2.1, 5.2.3, 9.2, 9.3, 9.8.2, 9.8.3, 9.9.1, 9.10.2, 9.10.3

Contractor's Superintendent

3.9, 10.2.6

Contractor's Supervision and Construction

Procedures

1.2.2, 3.3, 3.4, 3.12.10, 4.2.2, 4.2.7, 6.1.3, 6.2.4, 7.1.3, 7.3.4, 7.3.6, 8.2, 10, 12, 14, 15.1.4

Coordination and Correlation

1.2, 3.2.1, 3.3.1, 3.10, 3.12.6, 6.1.3, 6.2.1

Copies Furnished of Drawings and Specifications

1.5, 2.3.6, 3.11

Copyrights

1.5, **3.17**

Correction of Work

2.5, 3.7.3, 9.4.2, 9.8.2, 9.8.3, 9.9.1, 12.1.2, **12.2**, 12.3, 15.1.3.1, 15.1.3.2, 15.2.1

Correlation and Intent of the Contract Documents
1.2

Cost, Definition of

7.3.4

Costs

2.5, 3.2.4, 3.7.3, 3.8.2, 3.15.2, 5.4.2, 6.1.1, 6.2.3, 7.3.3.3, 7.3.4, 7.3.8, 7.3.9, 9.10.2, 10.3.2, 10.3.6, 11.2, 12.1.2, 12.2.1, 12.2.4, 13.4, 14

Cutting and Patching

3.14, 6.2.5

Damage to Construction of Owner or Separate Contractors

3.14.2, 6.2.4, 10.2.1.2, 10.2.5, 10.4, 12.2.4

Damage to the Work

3.14.2, 9.9.1, 10.2.1.2, 10.2.5, 10.4, 12.2.4

Damages, Claims for

3.2.4, 3.18, 6.1.1, 8.3.3, 9.5.1, 9.6.7, 10.3.3, 11.3.2, 11.3, 14.2.4, 15.1.7

Damages for Delay

6.2.3, 8.3.3, 9.5.1.6, 9.7, 10.3.2, 14.3.2

Date of Commencement of the Work, Definition of
8.1.2

Date of Substantial Completion, Definition of
8.1.3

Day, Definition of

8.1.4

Decisions of the Architect

3.7.4, 4.2.6, 4.2.7, 4.2.11, 4.2.12, 4.2.13, 6.3, 7.3.4, 7.3.9, 8.1.3, 8.3.1, 9.2, 9.4, 9.5.1, 9.8.4, 9.9.1, 13.4.2, 14.2.2, 14.2.4, 15.1, 15.2

Decisions to Withhold Certification

9.4.1, **9.5**, 9.7, 14.1.1.3

Defective or Nonconforming Work, Acceptance, Rejection and Correction of

2.5, 3.5, 4.2.6, 6.2.3, 9.5.1, 9.5.3, 9.6.6, 9.8.2, 9.9.3, 9.10.4, 12.2.1

Definitions

1.1, 2.1.1, 3.1.1, 3.5, 3.12.1, 3.12.2, 3.12.3, 4.1.1, 5.1, 6.1.2, 7.2.1, 7.3.1, 8.1, 9.1, 9.8.1, 15.1.1

Delays and Extensions of Time

3.2, **3.7.4**, 5.2.3, 7.2.1, 7.3.1, **7.4**, **8.3**, 9.5.1, **9.7**, 10.3.2, **10.4**, 14.3.2, **15.1.6**, 15.2.5

Digital Data Use and Transmission

1.7

Disputes

6.3, 7.3.9, 15.1, 15.2

Documents and Samples at the Site

3.11

Drawings, Definition of

1.1.5

Drawings and Specifications, Use and Ownership of

3.11

Effective Date of Insurance

8.2.2

Emergencies

10.4, 14.1.1.2, **15.1.5**

Employees, Contractor's

3.3.2, 3.4.3, 3.8.1, 3.9, 3.18.2, 4.2.3, 4.2.6, 10.2, 10.3.3, 11.3, 14.1, 14.2.1.1

Equipment, Labor, or Materials

1.1.3, 1.1.6, 3.4, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1, 4.2.6, 4.2.7, 5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3, 9.10.2, 10.2.1, 10.2.4, 14.2.1.1, 14.2.1.2

Execution and Progress of the Work

1.1.3, 1.2.1, 1.2.2, 2.3.4, 2.3.6, 3.1, 3.3.1, 3.4.1, 3.7.1, 3.10.1, 3.12, 3.14, 4.2, 6.2.2, 7.1.3, 7.3.6, 8.2, 9.5.1, 9.9.1, 10.2, 10.3, 12.1, 12.2, 14.2, 14.3.1, 15.1.4

Extensions of Time

3.2.4, 3.7.4, 5.2.3, 7.2.1, 7.3, 7.4, 9.5.1, 9.7, 10.3.2, 10.4, 14.3, 15.1.6, **15.2.5**

Failure of Payment

9.5.1.3, **9.7**, 9.10.2, 13.5, 14.1.1.3, 14.2.1.2

Init.

Faulty Work

(See Defective or Nonconforming Work)

Final Completion and Final Payment

4.2.1, 4.2.9, 9.8.2, **9.10**, 12.3, 14.2.4, 14.4.3

Financial Arrangements, Owner's

2.2.1, 13.2.2, 14.1.1.4

GENERAL PROVISIONS

1

Governing Law

13.1

Guarantees (See Warranty)

Hazardous Materials and Substances

10.2.4, **10.3**

Identification of Subcontractors and Suppliers

5.2.1

Indemnification

3.17, **3.18**, 9.6.8, 9.10.2, 10.3.3, 11.3

Information and Services Required of the Owner

2.1.2, **2.2**, 2.3, 3.2.2, 3.12.10.1, 6.1.3, 6.1.4, 6.2.5,

9.6.1, 9.9.2, 9.10.3, 10.3.3, 11.2, 13.4.1, 13.4.2,

14.1.1.4, 14.1.4, 15.1.4

Initial Decision

15.2

Initial Decision Maker, Definition of

1.1.8

Initial Decision Maker, Decisions

14.2.4, 15.1.4.2, 15.2.1, 15.2.2, 15.2.3, 15.2.4, 15.2.5

Initial Decision Maker, Extent of Authority

14.2.4, 15.1.4.2, 15.2.1, 15.2.2, 15.2.3, 15.2.4, 15.2.5

Injury or Damage to Person or Property

10.2.8, 10.4

Inspections

3.1.3, 3.3.3, 3.7.1, 4.2.2, 4.2.6, 4.2.9, 9.4.2, 9.8.3,

9.9.2, 9.10.1, 12.2.1, 13.4

Instructions to Bidders

1.1.1

Instructions to the Contractor

3.2.4, 3.3.1, 3.8.1, 5.2.1, 7, 8.2.2, 12, 13.4.2

Instruments of Service, Definition of

1.1.7

Insurance

6.1.1, 7.3.4, 8.2.2, 9.3.2, 9.8.4, 9.9.1, 9.10.2, 10.2.5,

11

Insurance, Notice of Cancellation or Expiration

11.1.4, 11.2.3

Insurance, Contractor's Liability

11.1

Insurance, Effective Date of

8.2.2, 14.4.2

Insurance, Owner's Liability

11.2

Insurance, Property

10.2.5, 11.2, 11.4, 11.5

Insurance, Stored Materials

9.3.2

INSURANCE AND BONDS

11

Insurance Companies, Consent to Partial Occupancy

9.9.1

Insured loss, Adjustment and Settlement of

11.5

Intent of the Contract Documents

1.2.1, 4.2.7, 4.2.12, 4.2.13

Interest

13.5

Interpretation

1.1.8, 1.2.3, **1.4**, 4.1.1, 5.1, 6.1.2, 15.1.1

Interpretations, Written

4.2.11, 4.2.12

Judgment on Final Award

15.4.2

Labor and Materials, Equipment

1.1.3, 1.1.6, **3.4**, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1,

5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3, 9.10.2, 10.2.1,

10.2.4, 14.2.1.1, 14.2.1.2

Labor Disputes

8.3.1

Laws and Regulations

1.5, 2.3.2, 3.2.3, 3.2.4, 3.6, 3.7, 3.12.10, 3.13, 9.6.4,

9.9.1, 10.2.2, 13.1, 13.3.1, 13.4.2, 13.5, 14, 15.2.8,

15.4

Liens

2.1.2, 9.3.1, 9.3.3, 9.6.8, 9.10.2, 9.10.4, 15.2.8

Limitations, Statutes of

12.2.5, 15.1.2, 15.4.1.1

Limitations of Liability

3.2.2, 3.5, 3.12.10, 3.12.10.1, 3.17, 3.18.1, 4.2.6,

4.2.7, 6.2.2, 9.4.2, 9.6.4, 9.6.7, 9.6.8, 10.2.5, 10.3.3,

11.3, 12.2.5, 13.3.1

Limitations of Time

2.1.2, 2.2, 2.5, 3.2.2, 3.10, 3.11, 3.12.5, 3.15.1, 4.2.7,

5.2, 5.3, 5.4.1, 6.2.4, 7.3, 7.4, 8.2, 9.2, 9.3.1, 9.3.3,

9.4.1, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 12.2, 13.4, 14, 15,

15.1.2, 15.1.3, 15.1.5

Materials, Hazardous

10.2.4, **10.3**

Materials, Labor, Equipment and

1.1.3, 1.1.6, 3.4.1, 3.5, 3.8.2, 3.8.3, 3.12, 3.13, 3.15.1,

5.2.1, 6.2.1, 7.3.4, 9.3.2, 9.3.3, 9.5.1.3, 9.10.2,

10.2.1.2, 10.2.4, 14.2.1.1, 14.2.1.2

Means, Methods, Techniques, Sequences and

Procedures of Construction

3.3.1, 3.12.10, 4.2.2, 4.2.7, 9.4.2

Mechanic's Lien

2.1.2, 9.3.1, 9.3.3, 9.6.8, 9.10.2, 9.10.4, 15.2.8

Mediation

8.3.1, 15.1.3.2, 15.2.1, 15.2.5, 15.2.6, **15.3**, 15.4.1,

15.4.1.1

Minor Changes in the Work

1.1.1, 3.4.2, 3.12.8, 4.2.8, 7.1, **7.4**

MISCELLANEOUS PROVISIONS

13

Modifications, Definition of

1.1.1

Init.

Modifications to the Contract

1.1.1, 1.1.2, 2.5, 3.11, 4.1.2, 4.2.1, 5.2.3, 7, 8.3.1, 9.7, 10.3.2

Mutual Responsibility**6.2****Nonconforming Work, Acceptance of**

9.6.6, 9.9.3, **12.3**

Nonconforming Work, Rejection and Correction of
2.4, 2.5, 3.5, 4.2.6, 6.2.4, 9.5.1, 9.8.2, 9.9.3, 9.10.4, 12.2

Notice

1.6, 1.6.1, 1.6.2, 2.1.2, 2.2.2., 2.2.3, 2.2.4, 2.5, 3.2.4, 3.3.1, 3.7.4, 3.7.5, 3.9.2, 3.12.9, 3.12.10, 5.2.1, 7.4, 8.2.2, 9.6.8, 9.7, 9.10.1, 10.2.8, 10.3.2, 11.5, 12.2.2.1, 13.4.1, 13.4.2, 14.1, 14.2.2, 14.4.2, 15.1.3, 15.1.5, 15.1.6, 15.4.1

Notice of Cancellation or Expiration of Insurance

11.1.4, 11.2.3

Notice of Claims

1.6.2, 2.1.2, 3.7.4, 9.6.8, 10.2.8, **15.1.3**, 15.1.5, 15.1.6, 15.2.8, 15.3.2, 15.4.1

Notice of Testing and Inspections

13.4.1, 13.4.2

Observations, Contractor's

3.2, 3.7.4

Occupancy

2.3.1, 9.6.6, 9.8

Orders, Written

1.1.1, 2.4, 3.9.2, 7, 8.2.2, 11.5, 12.1, 12.2.2.1, 13.4.2, 14.3.1

OWNER**2**

Owner, Definition of

2.1.1

Owner, Evidence of Financial Arrangements

2.2, 13.2.2, 14.1.1.4

Owner, Information and Services Required of the

2.1.2, **2.2**, 2.3, 3.2.2, 3.12.10, 6.1.3, 6.1.4, 6.2.5, 9.3.2, 9.6.1, 9.6.4, 9.9.2, 9.10.3, 10.3.3, 11.2, 13.4.1, 13.4.2, 14.1.1.4, 14.1.4, 15.1.4

Owner's Authority

1.5, 2.1.1, 2.3.32.4, 2.5, 3.4.2, 3.8.1, 3.12.10, 3.14.2, 4.1.2, 4.2.4, 4.2.9, 5.2.1, 5.2.4, 5.4.1, 6.1, 6.3, 7.2.1, 7.3.1, 8.2.2, 8.3.1, 9.3.2, 9.5.1, 9.6.4, 9.9.1, 9.10.2, 10.3.2, 11.4, 11.5, 12.2.2, 12.3, 13.2.2, 14.3, 14.4, 15.2.7

Owner's Insurance

11.2

Owner's Relationship with Subcontractors

1.1.2, 5.2, 5.3, 5.4, 9.6.4, 9.10.2, 14.2.2

Owner's Right to Carry Out the Work

2.5, 14.2.2

Owner's Right to Clean Up

6.3

Owner's Right to Perform Construction and to

Award Separate Contracts

6.1

Owner's Right to Stop the Work

2.4

Owner's Right to Suspend the Work

14.3

Owner's Right to Terminate the Contract

14.2, 14.4

Ownership and Use of Drawings, Specifications and Other Instruments of Service

1.1.1, 1.1.6, 1.1.7, **1.5**, 2.3.6, 3.2.2, 3.11, 3.17, 4.2.12, 5.3

Partial Occupancy or Use

9.6.6, **9.9**

Patching, Cutting and

3.14, 6.2.5

Patents

3.17

Payment, Applications for

4.2.5, 7.3.9, 9.2, **9.3**, 9.4, 9.5, 9.6.3, 9.7, 9.8.5, 9.10.1, 14.2.3, 14.2.4, 14.4.3

Payment, Certificates for

4.2.5, 4.2.9, 9.3.3, **9.4**, 9.5, 9.6.1, 9.6.6, 9.7, 9.10.1, 9.10.3, 14.1.1.3, 14.2.4

Payment, Failure of

9.5.1.3, **9.7**, 9.10.2, 13.5, 14.1.1.3, 14.2.1.2

Payment, Final

4.2.1, 4.2.9, **9.10**, 12.3, 14.2.4, 14.4.3

Payment Bond, Performance Bond and

7.3.4.4, 9.6.7, 9.10.3, **11.1.2**

Payments, Progress

9.3, **9.6**, 9.8.5, 9.10.3, 14.2.3, 15.1.4

PAYMENTS AND COMPLETION**9**

Payments to Subcontractors

5.4.2, 9.5.1.3, 9.6.2, 9.6.3, 9.6.4, 9.6.7, 14.2.1.2

PCB

10.3.1

Performance Bond and Payment Bond

7.3.4.4, 9.6.7, 9.10.3, **11.1.2**

Permits, Fees, Notices and Compliance with Laws

2.3.1, **3.7**, 3.13, 7.3.4.4, 10.2.2

PERSONS AND PROPERTY, PROTECTION**OF****10**

Polychlorinated Biphenyl

10.3.1

Product Data, Definition of

3.12.2

Product Data and Samples, Shop Drawings

3.11, **3.12**, 4.2.7

Progress and Completion

4.2.2, **8.2**, 9.8, 9.9.1, 14.1.4, 15.1.4

Progress Payments

9.3, **9.6**, 9.8.5, 9.10.3, 14.2.3, 15.1.4

Project, Definition of

1.1.4

Project Representatives

4.2.10

Init.

Property Insurance10.2.5, **11.2**

Proposal Requirements

1.1.1

**PROTECTION OF PERSONS AND PROPERTY
10**

Regulations and Laws

1.5, 2.3.2, 3.2.3, 3.6, 3.7, 3.12.10, 3.13, 9.6.4, 9.9.1, 10.2.2, 13.1, 13.3, 13.4.1, 13.4.2, 13.5, 14, 15.2.8, 15.4

Rejection of Work

4.2.6, 12.2.1

Releases and Waivers of Liens

9.3.1, 9.10.2

Representations

3.2.1, 3.5, 3.12.6, 8.2.1, 9.3.3, 9.4.2, 9.5.1, 9.10.1

Representatives

2.1.1, 3.1.1, 3.9, 4.1.1, 4.2.10, 13.2.1

Responsibility for Those Performing the Work

3.3.2, 3.18, 4.2.2, 4.2.3, 5.3, 6.1.3, 6.2, 6.3, 9.5.1, 10

Retainage

9.3.1, 9.6.2, 9.8.5, 9.9.1, 9.10.2, 9.10.3

Review of Contract Documents and Field**Conditions by Contractor****3.2**, 3.12.7, 6.1.3

Review of Contractor's Submittals by Owner and Architect

3.10.1, 3.10.2, 3.11, 3.12, 4.2, 5.2, 6.1.3, 9.2, 9.8.2

Review of Shop Drawings, Product Data and Samples by Contractor

3.12

Rights and Remedies1.1.2, 2.4, 2.5, 3.5, 3.7.4, 3.15.2, 4.2.6, 5.3, 5.4, 6.1, 6.3, 7.3.1, 8.3, 9.5.1, 9.7, 10.2.5, 10.3, 12.2.1, 12.2.2, 12.2.4, **13.3**, 14, 15.4**Royalties, Patents and Copyrights****3.17**

Rules and Notices for Arbitration

15.4.1

Safety of Persons and Property**10.2**, 10.4**Safety Precautions and Programs**3.3.1, 4.2.2, 4.2.7, 5.3, **10.1**, 10.2, 10.4

Samples, Definition of

3.12.3**Samples, Shop Drawings, Product Data and**3.11, **3.12**, 4.2.7**Samples at the Site, Documents and****3.11****Schedule of Values****9.2**, 9.3.1

Schedules, Construction

3.10, 3.12.1, 3.12.2, 6.1.3, 15.1.6.2

Separate Contracts and Contractors

1.1.4, 3.12.5, 3.14.2, 4.2.4, 4.2.7, 6, 8.3.1, 12.1.2

Separate Contractors, Definition of**6.1.1****Shop Drawings, Definition of****3.12.1****Shop Drawings, Product Data and Samples**3.11, **3.12**, 4.2.7**Site, Use of****3.13**, 6.1.1, 6.2.1

Site Inspections

3.2.2, 3.3.3, 3.7.1, 3.7.4, 4.2, 9.9.2, 9.4.2, 9.10.1, 13.4

Site Visits, Architect's

3.7.4, 4.2.2, 4.2.9, 9.4.2, 9.5.1, 9.9.2, 9.10.1, 13.4

Special Inspections and Testing

4.2.6, 12.2.1, 13.4

Specifications, Definition of**1.1.6****Specifications**1.1.1, **1.1.6**, 1.2.2, 1.5, 3.12.10, 3.17, 4.2.14

Statute of Limitations

15.1.2, 15.4.1.1

Stopping the Work

2.2.2, 2.4, 9.7, 10.3, 14.1

Stored Materials

6.2.1, 9.3.2, 10.2.1.2, 10.2.4

Subcontractor, Definition of**5.1.1****SUBCONTRACTORS****5**

Subcontractors, Work by

1.2.2, 3.3.2, 3.12.1, 3.18, 4.2.3, 5.2.3, 5.3, 5.4, 9.3.1.2, 9.6.7

Subcontractual Relations**5.3**, 5.4, 9.3.1.2, 9.6, 9.10, 10.2.1, 14.1, 14.2.1

Submittals

3.10, 3.11, 3.12, 4.2.7, 5.2.1, 5.2.3, 7.3.4, 9.2, 9.3, 9.8, 9.9.1, 9.10.2, 9.10.3

Submittal Schedule

3.10.2, 3.12.5, 4.2.7

Subrogation, Waivers of6.1.1, **11.3****Substances, Hazardous****10.3****Substantial Completion**4.2.9, 8.1.1, 8.1.3, 8.2.3, 9.4.2, **9.8**, 9.9.1, 9.10.3, 12.2, 15.1.2**Substantial Completion, Definition of****9.8.1**

Substitution of Subcontractors

5.2.3, 5.2.4

Substitution of Architect

2.3.3

Substitutions of Materials

3.4.2, 3.5, 7.3.8

Sub-subcontractor, Definition of**5.1.2**

Subsurface Conditions

3.7.4

Successors and Assigns**13.2**

Init.

Superintendent

3.9, 10.2.6

Supervision and Construction Procedures

1.2.2, 3.3, 3.4, 3.12.10, 4.2.2, 4.2.7, 6.1.3, 6.2.4, 7.1.3, 7.3.4, 8.2, 8.3.1, 9.4.2, 10, 12, 14, 15.1.4

Suppliers

1.5, 3.12.1, 4.2.4, 4.2.6, 5.2.1, 9.3, 9.4.2, 9.5.4, 9.6, 9.10.5, 14.2.1

Surety

5.4.1.2, 9.6.8, 9.8.5, 9.10.2, 9.10.3, 11.1.2, 14.2.2, 15.2.7

Surety, Consent of

9.8.5, 9.10.2, 9.10.3

Surveys

1.1.7, 2.3.4

Suspension by the Owner for Convenience

14.3

Suspension of the Work

3.7.5, 5.4.2, 14.3

Suspension or Termination of the Contract

5.4.1.1, 14

Taxes

3.6, 3.8.2.1, 7.3.4.4

Termination by the Contractor

14.1, 15.1.7

Termination by the Owner for Cause

5.4.1.1, 14.2, 15.1.7

Termination by the Owner for Convenience

14.4

Termination of the Architect

2.3.3

Termination of the Contractor Employment

14.2.2

TERMINATION OR SUSPENSION OF THE CONTRACT

14

Tests and Inspections

3.1.3, 3.3.3, 3.7.1, 4.2.2, 4.2.6, 4.2.9, 9.4.2, 9.8.3, 9.9.2, 9.10.1, 10.3.2, 12.2.1, 13.4

TIME

8

Time, Delays and Extensions of

3.2.4, 3.7.4, 5.2.3, 7.2.1, 7.3.1, 7.4, 8.3, 9.5.1, 9.7, 10.3.2, 10.4, 14.3.2, 15.1.6, 15.2.5

Time Limits

2.1.2, 2.2, 2.5, 3.2.2, 3.10, 3.11, 3.12.5, 3.15.1, 4.2, 5.2, 5.3, 5.4, 6.2.4, 7.3, 7.4, 8.2, 9.2, 9.3.1, 9.3.3,

9.4.1, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 12.2, 13.4, 14, 15.1.2, 15.1.3, 15.4

Time Limits on Claims

3.7.4, 10.2.8, 15.1.2, 15.1.3

Title to Work

9.3.2, 9.3.3

UNCOVERING AND CORRECTION OF WORK

12

Uncovering of Work

12.1

Unforeseen Conditions, Concealed or Unknown

3.7.4, 8.3.1, 10.3

Unit Prices

7.3.3.2, 9.1.2

Use of Documents

1.1.1, 1.5, 2.3.6, 3.12.6, 5.3

Use of Site

3.13, 6.1.1, 6.2.1

Values, Schedule of

9.2, 9.3.1

Waiver of Claims by the Architect

13.3.2

Waiver of Claims by the Contractor

9.10.5, 13.3.2, 15.1.7

Waiver of Claims by the Owner

9.9.3, 9.10.3, 9.10.4, 12.2.2.1, 13.3.2, 14.2.4, 15.1.7

Waiver of Consequential Damages

14.2.4, 15.1.7

Waiver of Liens

9.3, 9.10.2, 9.10.4

Waivers of Subrogation

6.1.1, 11.3

Warranty

3.5, 4.2.9, 9.3.3, 9.8.4, 9.9.1, 9.10.2, 9.10.4, 12.2.2, 15.1.2

Weather Delays

8.3, 15.1.6.2

Work, Definition of

1.1.3

Written Consent

1.5.2, 3.4.2, 3.7.4, 3.12.8, 3.14.2, 4.1.2, 9.3.2, 9.10.3, 13.2, 13.3.2, 15.4.4.2

Written Interpretations

4.2.11, 4.2.12

Written Orders

1.1.1, 2.4, 3.9, 7, 8.2.2, 12.1, 12.2, 13.4.2, 14.3.1

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk

and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in

such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or

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equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;

- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

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§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages,

compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of

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other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term “Contractor” in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner’s own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner’s own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor’s construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor’s Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor’s Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner’s or Separate Contractor’s completed or partially completed construction is fit and proper to receive the Contractor’s Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor’s delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor’s delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner’s Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

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§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or

(3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS**§ 11.1 Contractor's Insurance and Bonds**

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by

an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§ 11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract

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Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in

Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or Suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand

for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

DOCUMENT 00 73 00 – SUPPLEMENTARY CONDITIONS

The following supplements modify the “General Conditions of the Contract for Construction,” AIA Document A201-2007. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

Add the following Subparagraph .1 after Paragraph 1.1.1:

1.1.1.1 The Contract Documents executed or identified in accordance with Paragraph 1.5.1 shall prevail in case of an inconsistency with subsequent versions made through manipulatable electronic operations involving computers.

§ 1.1.5 THE DRAWINGS

Add the following Subparagraph 1.1.5.1 after Paragraph 1.1.5:

1.1.5.1 Where only part of the Work is indicated, similar parts are considered repetitive. Where any detail is shown and components thereof are fully described, similar details not fully described are deemed to incorporate similar material and construction.

Add the following Paragraph after Paragraph 1.1.8:

§ 1.1.9 MISCELLANEOUS DEFINITIONS

1.1.9.1 The following definitions apply to terms used in the Contract Documents:

- .1** "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- .2** "Complete": Complete with connections, supports, attachments, and incidental items necessary for a finished and properly operating assembly or installation.
- .3** "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- .4** "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- .5** "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- .6** "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- .7** "Install": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.
- .8** "Provide": Furnish and install, complete and ready for the intended use.
- .9** "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

Add the following Subparagraph after Paragraph 1.2.1:

1.2.1.1 The Contractor acknowledges and agrees that the Contract Documents are sufficient to provide for the completion of the Work, including Work, whether or not shown or described, which may reasonably be inferred to be required for the completion of the Work in accordance with information given in the Contract Documents.

Add the following Paragraph after Paragraph 1.2.3:

§ 1.2.4 If there should be a conflict between two or more of the Contract Documents, the following order of interpretation shall apply

- .1** Where requirements specifically set forth in the Owner-Contractor Agreement are in conflict with other Contract Documents, the Owner-Contractor Agreement shall govern.
- .2** Where there is a conflict between the requirements of the General Conditions of the Contract and the Supplementary Conditions, the requirements of the Supplementary Conditions shall govern, except where the requirements set forth in the Supplementary conditions are contrary to law, in which case the legal requirements shall govern. The General Conditions of the Contract shall take precedence over the other Contract Documents except for the Owner-Contractor Agreement.
- .3** Where there is a conflict between the Drawings and Specifications or a conflict within the Drawings or within the Specifications, the conflict shall be brought to the attention of the Architect for determination and resolution of the conflict.

§ 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

Add the following Sections and Sections after Section 1.6:

§ 1.6.1 The Contractor shall execute a data licensing agreement as required in Division 01 General Requirements.

§ 1.6.2 The Contractor shall not transfer or reuse Instruments of Service in electronic or machine-readable form without the prior written consent of the Architect.

ARTICLE 3 CONTRACTOR

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 Safety of Prescribed Construction Means and Methods:

Delete from the second sentence the following text: . . . "unless Contract Documents give other specific instructions concerning these matters."

Delete sentences 4 and 5 from Section 3.3.1 and insert the following:

"If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give advance written notice to the Owner and Architect, informing the Owner and the Architect of the alternate means, methods, techniques, sequences or procedures the Contractor intends to utilize in the performance of the Work, and, unless the Owner or the Architect takes exception to the proposed means, methods, techniques, sequences or procedures, the Contractor shall proceed with the Work using the alternate means, methods, techniques, sequences, or procedures that the Contractor has determined are safe."

Add the following Subparagraphs after Paragraph 3.3.2:

- .1** The Jessica Lunsford Act enacted by the North Carolina General Assembly requires that the Contractor and subcontractors, consultants, sub-consultants, and vendors be in compliance with this statute.
- .2** The Contractor and subcontractors, consultants, sub-consultants, and vendors shall annually conduct a review of the State Sex Offender and Public Protection Registration Program, the State Sexually Violent Predator Registration Program, and the National Sex Offender Registry for all employees who will provide services under this Contract. Any employee of the Contractor, subcontractor, consultant, sub-consultant, or vendor found to be registered on any of the lists identified herein shall not perform any work under this Contract and shall not be permitted to enter

property owned by Union County Public Schools or Union County on behalf of Union County Public Schools. Failure to comply may result in legal action and termination of the Contract for default.

- .3 It is the Contractor's responsibility to ensure that all subcontractors, sub-consultants and vendors involved with this Project are in compliance with this law.
- .4 Employees of the Contractor, subcontractor, consultant, sub-consultant, and their vendors shall dress appropriately for a school environment and perform their work in a professional manner. Determination of compliance with this requirement shall be solely at the discretion of the Owner. Contractor shall immediately remove non-complying personnel from the Owner's property.
- .5 Union County Public Schools is a tobacco-free facility. Employees of the Contractor, subcontractor, consultant, sub-consultant, and their vendors shall refrain from use of all tobacco products including e-cigarettes while on the Owner's property.
6. Employees of the Contractor, subcontractor, consultant, sub-consultant, and their vendors shall comply with the Owner's Safety Programs, the Contractor's safety program, and with state and federal safety regulations. The Contractor shall provide a copy of the Contractor's written safety program to the Owner's Facilities Project Manager within three business days of request.

§ 3.4 LABOR AND MATERIALS

Add the following Subparagraph to Paragraph 3.4.1:

3.4.1.1 Not later than 15 days following date of issuance of Notice of Intent to Award or commencement of the Work, whichever occurs first, the Contractor shall furnish in writing to the Architect a Product List indicating the names and model numbers of specific products, equipment and systems proposed for the Work.

Delete Paragraph 3.4.2 and substitute the following Paragraph 3.4.2 and Subparagraphs .1 and .2:

§ 3.4.2 After the Contract has been executed, the Architect will consider a formal request for the substitution of comparable products in place of those specified only under the conditions and limitations set forth in Division 01 General Requirements. By making requests for substitutions, the Contractor:

- .1 represents that the Contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified, except as specifically indicated by the Contractor in writing as part of the request;
- .2 represents that the Contractor will provide the same warranty for the substitution that the Contractor would for that specified.

§ 3.6 TAXES

Add the following Paragraph 3.6.1 after Paragraph 3.6:

§ 3.6.1 Sales and use tax on materials are included in the Contract Sum. The Contractor shall document sales and use tax paid by the Contractor and subcontractors on material purchases in accordance with NCGS 105-164.14c. The Contractor shall submit certified documentation with each Application for Payment in a notarized form acceptable to the Owner. Refund of sales and use tax paid by the Contractor, if any, shall be for the benefit of the Owner.

§ 3.7 PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS

Add the following Subparagraph 3.7.1.1 after Paragraph 3.7.1:

3.7.1.1 The Owner will pay the Capacity Use Fee (Impact Fee) for the Project. All other fees shall be the responsibility of the Contractor.

Add the following Paragraph 3.7.6 after Paragraph 3.7.5:

§ 3.7.6 Contractor shall comply with project statement notice requirements of NCGS General Statute §44A-27, and shall ensure that subcontractors and suppliers likewise comply with respect to other subcontractors and suppliers, if any, who are not in direct contract with the Contractor.

- .1 The Contractor shall indemnify and hold harmless the Owner from any costs, including without limitation costs of delays or attorney fees incurred by Owner, arising out of any dispute or litigation involving sub-subcontractors and subcontractors or Contractor including without limitation any disputes arising out of Contractor's or its subcontractors' failure to comply with applicable lien statutes. All costs of such dispute or litigation involving sub-subcontractors and subcontractors or Contractor shall be borne by Contractor.

§ 3.9 SUPERINTENDENT

Add the following Subparagraphs to Paragraph 3.9.1:

- .1 The Superintendent shall be considered competent if he has successfully completed at least two other similar projects of similar scope and complexity to this Project while serving in the role of Project Superintendent.
- .2 The Superintendent shall be on site while work is being performed.

Add Paragraph 3.9.4 to Section 3.9:

§ 3.9.4 The Contractor shall maintain the same approved Project Manager and Field Superintendent from the time of issuance of the Notice to Proceed until the Date of Substantial Completion, or shall submit proposed changes in personnel to the Architect in accordance with 3.9.2.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

Add the following Paragraph 3.10.4 after Paragraph 3.10.3:

§ 3.10.4 Based upon local Weather data, the following 10-year average shall establish the number of rain days to be included in the Contractor's Construction Schedule as normal. Rain days are defined as periods of 24 hours within which precipitation is one-tenth (0.1) of an inch or greater. Rain days shall be understood to be work days, exclusive of holidays, Sundays and other non-working days. Rain-related days will be considered based upon amounts of precipitation encountered during the construction process. The Contractor shall use these monthly averages when establishing the construction schedule for this project. Claims for delays due to abnormal rain delays will not be considered until the number of rain days during which critical path work is actually delayed exceeds the number allowed in the schedule as follows:

January: 6 Days	May: 6 Days	September: 4 Days
February: 6 Days	June: 5 Days	October: 4 Days
March: 6 Days	July: 6 Days	November: 4 Days
April: 5 Days	August: 6 Days	December: 6 Days

- .1 Rain days, as identified above, are to aid the Contractors in their scheduling. These days are included in the total time allowed for construction as defined in Article 8 of these Supplementary General Conditions. Used and unused days are not available for extending the project time nor may they be used to decrease the project time. Rain days shall cease upon the drying in/enclosure of the building unless the Contractor can prove his claim for weather related delay based upon extreme conditions or Acts of God.

ARTICLE 4 ARCHITECT

§ 4.1 GENERAL

Add the following Subparagraph after Paragraph 4.1.1:

4.1.1.1 The term "Architect," "Architect/ Engineer," or "Engineer" as used in the Contract Documents means the Architect or his authorized representative.

§ 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Delete the last sentence of this Paragraph in its entirety.

ARTICLE 5 SUBCONTRACTORS

Add the following Subparagraph after Paragraph 5.1.2:

- .1 Sub-Subcontracting of work is discouraged on Union County Public School Projects. The Contractor is directly responsible for the performance of Subcontractors and their Sub-subcontractors. If the Contractor chooses to allow sub-subcontracts for portions of the Work, the Contractor shall remain directly responsible for sub-subcontractor's actions and remedies required. The Owner shall not be inconvenienced by conflicts with Subcontractors or their Sub-subcontractors. The Contractor shall make or cause to be made corrections to defective work and repairs in a responsive manner without regard to the outcome of conflict resolution between subcontracted parties.

§ 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

Add Subparagraph 5.2.1.1 after Paragraph 5.2.1:

5.2.1.1 Not later than 14 days following date of issuance of Notice to Proceed or commencement of the Work, whichever occurs first, the Contractor shall furnish in writing to the Architect the Manufacturer/Subcontractor List consisting of a complete list of names of persons or entities proposed as manufacturers, fabricators, or material suppliers for the products, equipment and systems proposed for the Work and, where applicable, the name of the installing Subcontractor.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.2 MUTUAL RESPONSIBILITY

Delete Paragraph 6.2.3 and replace with the following:

§ 6.2.3 If a separate Contractor initiates legal or other proceedings against the Owner on account of damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor, who shall defend such proceedings at its own expense, and if judgment or award against the Owner arises therefrom, the Contractor shall pay or satisfy it and shall reimburse the Owner for attorneys' fees and court or other costs which the Owner has incurred over and above those paid for directly by the Contractor.

§ 6.2.4 (Delete the word...."wrongfully"....in this subparagraph).

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

Add Paragraphs 7.1.4, 7.1.5, and 7.1.6:

§ 7.1.4 Overhead and profit applied to pricing of changes in the Work where the basis of payment for the change is cost plus overhead and profit may be stated separately or combined but, in either case, should distinguish between:

- .1 the amounts to be paid to the Contractor for Work performed by the Contractor with that Contractor's own forces and for materials purchased directly by the Contractor (not through a Subcontractor).
- .2 the amounts to be paid to the Contractor and Subcontractor for Work performed by the Subcontractor with that Subcontractor's own forces and for materials or purchased directly by that Subcontractor (not through a Sub-subcontractor).

§ 7.1.5 The combined overhead and profit included in the total cost to the Owner of a change in the Work shall be based on the following schedule, unless otherwise stated in the Owner-Contractor Agreement:

- .1 For extra Work completed by the Contractor with his own labor, not more than 15 percent shall be added as the allowance for overhead and profit.
- .2 For extra Work completed by Subcontractors of the Contractor, not more than 10 percent shall be added as the allowance for overhead and profit.

- .3 For Work deleted which would have been completed by the Contractor, with his own labor, not less than 10 percent shall be credited to the Owner as the allowance for overhead and profit.
- .4 For Work deleted which would have been completed by Subcontractors of the Contractor, not less than 5 percent shall be credited to the Owner by the Contractor as the allowance for overhead and profit.

§ 7.1.6 In order to facilitate checking of quotations for extras or credits, all proposals shall be accompanied by a complete itemization of costs including labor, materials, and Subcontractors. Labor and materials shall be itemized in the manner prescribed above. Where major cost items are Subcontracts, they shall be itemized also.

Revise the fourth phrase in Paragraph 7.3.7 as follows:

§ 7.3.7 Change: "...an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount..." to read: "... a fixed percentage fee as provided in Paragraph 7.1.5 above for total profit and overhead."

Revise the last sentence of Paragraph 7.3.8 as follows:

§ 7.3.8 Change to read: "When both additions and deletions are involved in any one change, the allowance for overhead and profit shall be figured on the basis of net increase or decrease, if any."

ARTICLE 8 TIME

§ 8.1 DEFINITIONS

§ 8.1.2 (Delete the sentence and replace with the following): "The date of commencement of the Work is the effective date established in the Agreement or the date established in the Notice to Proceed given by the Owner."

§ 8.3 DELAYS AND EXTENSION OF TIME

Insert new Paragraphs 8.3.2 and 8.3.3 as follows:

§ 8.3.2 If the progress or completion of the Work is delayed by any fault, neglect, act or failure to act on the part of the Contractor or any one acting for or on behalf of the Contractor, then the Contractor shall, in addition to all of the other obligations imposed by this contract and by law upon the contractor, and at no cost or expense to the Owner, work such overtime or require the appropriate sub-contractor to work such overtime as may be necessary to make up for all time lost and to avoid delay in the progress and completion of the work. The "premium" cost of all such overtime work shall be paid by the Contractor.

- .1 For the purposes of this Article, "sub-contractors" shall be deemed to be acting for and on behalf of the Contractor.

§ 8.3.3 Should the progress or completion of the Work be delayed by any fault, neglect, act or failure to act on the part of the Contractor or any one acting for or on behalf of the Contractor so as to cause any additional cost, expense, liability or damage to the Owner or any damage or additional cost or expense for which the Owner may or shall become liable, the Contractor shall and does hereby agree to compensate the Owner for, and to indemnify the Owner against, all such costs, expenses, liabilities and damages.

Renumber existing Paragraph 8.3.2 as 8.3.4, and renumber existing Paragraph 8.3.3 as 8.3.5.

Add Subparagraphs 8.3.4.1 and 8.3.4.2 to Paragraph 8.3.4:

8.3.4.1 Requests for extensions of time due to unusual adverse weather conditions occurring prior to completion of the roof and temporary or permanent building enclosure will be evaluated by the Owner when submitted by the Contractor in accordance with the requirements of Division 01 Section "Contract Modification Procedures."

8.3.4.2 Extensions of Contract Time due to unusual adverse weather conditions shall not entitle the Contractor to claims for cost due to extended project overhead.

Add Section 8.4 after Section 8.3:

§ 8.4 CONTRACT TIME

§ 8.4.1 The Contractor shall commence the Work on a date to be specified in the Agreement or in a Notice to Proceed issued by [the Architect on behalf of] the Owner; and shall complete [each phase of] the Work by the date indicated for completion of [each phase of] the Work, the resultant number of days constituting the Contract Time.

- .1 The Contract Time shall be as stated in the Agreement.
- .1 The Contract Time shall be [300] calendar days.
- .1 The Contractor shall achieve Substantial Completion of the Work by [], based upon issuance of a Notice to Proceed on or about [].
- .1 The Contractor shall achieve Substantial Completion of the Work of each Phase by the dates indicated in the Phasing Schedule [attached to this Document] [in Section 011000 "Summary"].
- .2 The Contractor shall achieve Final Completion of the Work within [30] days of the date of Substantial Completion.
- .3 It is expressly understood and agreed by and between the Contractor and the Owner that the Contract Time defined above for completion of the Work is a reasonable time for completion of same, taking into consideration the average climatic range and usual conditions prevailing in this locality.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.3 APPLICATIONS FOR PAYMENT

Add Subparagraphs 9.3.1.3, 9.3.1.4, and 9.3.1.5 to Paragraph 9.3.1:

9.3.1.3 Until the Work is 50 percent complete, the Owner shall pay 95 percent of the amount due to the Contractor on account of progress payments. At the time the Work is 50 percent complete and thereafter, the Architect may certify remaining partial payments to be paid in full.

9.3.1.4 The Owner may elect to reinstate the full Contract retainage if the manner of completion of the Work and its progress do not remain satisfactory to the Architect or if the Surety withholds or revokes its consent, or for other good and sufficient reasons.

9.3.1.5 The Contractor shall submit with each Application for Payment a completed Statement of Sales Tax Paid and Minority Business Enterprise documentation in a form acceptable to the Owner.

Add Subparagraphs 9.3.2.1 through 9.3.2.4 to Paragraph 9.3.2:

9.3.2.1 In requesting payment for materials stored on or off the site, the Contractor shall submit with his Application for Payment the following:

- .1 an itemized list of the stored material prepared in sufficient detail to identify the materials and their value. Include an accounting for new items stored, paid items that continue in storage, and items previously stored and since incorporated in the Work.
- .2 evidence such as bills of sale or such other proof as may be requested by the Architect to substantiate that the materials listed have been paid for by the Contractor, or, for materials stored at the site only, a notarized statement from the materials supplier stating that the materials will become the property of the Owner upon payment by the Owner to the Contractor.

9.3.2.2 For material stored off the site, the Contractor shall additionally submit with his Application for Payment the following:

- .1 evidence that the materials are stored at the location previously agreed to in writing as provided by Subparagraph 9.3.2 of the General Conditions. No payment will be made for material stored off the site until the storage location has been agreed upon in writing. No payment will be made for material stored more than 50 miles from the Project site.
- .2 evidence that the storage location is bonded in a manner satisfactory to the Architect.
- .3 evidence that the materials are insured while in storage and while in transit to the site.

.4 evidence that transportation to the site will be provided by the Contractor.

9.3.2.4 Stored materials may be reviewed in their storage location by the Architect.

9.3.2.5 Contractor shall reimburse the Owner for the Architect's cost for inspections of off-site stored materials, to include his Time (travel, site observation, and office-related duties) per the hourly rate established by the fee/rate schedule attachment to Owner-Architect Agreement), the cost for Engineering Consultants if their services are needed, and will also include travel expenses at IRS approved travel expense rate but no less than \$0.50 per mile from base of operations office to the Project site or storage site and back. In no case will the charges be less than the minimum set at \$500.00 per inspection.

§ 9.8 SUBSTANTIAL COMPLETION

Add the following Subparagraph after Paragraph 9.8.1:

9.8.1.1 Substantial Completion shall also include final approval for occupancy and use by authorities having jurisdiction.

Add Subparagraphs 9.8.2.1 and 9.8.2.2 to Paragraph 9.8.2:

9.8.2.1 The Architect shall be entitled to rely upon the Contractor's comprehensive list of items to be completed or corrected in conjunction with the Architect's inspection to determine whether the Work or a designated portion thereof has attained Substantial Completion in accordance with the Contract Documents. The Owner shall be entitled to deduct from the Contract Sum amount paid to the Architect for preparation of such comprehensive list of items if such preparation is required in order to facilitate the Architect's determination of Substantial Completion.

9.8.2.2 The Architect will review the general condition of the Work and the Contractor's comprehensive list prior to the Architect's inspection to determine whether the nature or scope of work left to be completed or corrected will preclude immediate and full owner occupancy, and will not proceed with inspection for Substantial Completion, but will reschedule the inspection at such time that the Contractor has indicated that the work remaining to be completed or corrected is consistent with the definition of Substantial Completion.

Add Subparagraph 9.8.3.1 to Paragraph 9.8.3:

9.8.3.1 Except with the consent of the Owner, the Architect will perform no more than two (2) inspections to determine whether the Work or a designated portion thereof has attained Substantial Completion in accordance with the Contract Documents. The Owner shall be entitled to deduct from the Contract Sum amount paid to the Architect, including normally reimbursable expenses, for any additional inspections.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

Add the following sentence to Section 9.10.2:

"The Contractor shall furnish such evidence as may be necessary to show that out of state subcontractors or suppliers have fully met the requirements of payment of taxes as established in the law of the State or local subdivision thereof which may be in effect at the time of final payment. The Owner will require the submission of such proof or evidence before final payment will be approved or made."

Add Subparagraph 9.10.2.1 to Paragraph 9.10.2:

9.10.2.1 Except with the consent of the Owner, the Architect will perform no more than one (1) inspection to determine whether the Work or a designated portion thereof has attained Final Completion in accordance with the Contract Documents. The Owner shall be entitled to deduct from the Contract Sum amount paid to the Architect, including normally reimbursable expenses, for any additional inspections.

Add the following subparagraph to 9.10.3:

9.10.3.1 Owner's Option Final Payment: If at the time final completion is scheduled there are remaining uncompleted items, the contract may be closed and contract closeout completed, an amount equal to 250 percent of the value of each items as determined by the Architect shall be withheld for these items, as value to the Owner to provide for the Owner's completion of the work and related costs for Owner's and Architect's additional services.

Add the following Subparagraphs .4, .5, and .6 to Paragraph 9.10.4:

- .4 Claims for Indemnification;
- .5 Claims about which the Owner has given the Contractor written notice;
- .6 Claims arising after final payment.

Add Section 9.11:

§ 9.11 COSTS FOR ADDITIONAL INSPECTIONS

§ 9.11.1 The Architect's costs for additional inspections will include his Time (Travel, Site Visitation and Office) at the rate established in the fee/rate schedule attachment to the Owner-Architect Agreement, the cost for Engineering Consultants if their services are needed, including their travel expenses at IRS approved Travel Expense Rate but no less than \$0.50 per mile from base of operations office to the project site and back. In no case will the charges be less than the minimum set at \$500.00 per inspection.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.2 SAFETY OF PERSONS AND PROPERTY

Add Subparagraph 10.2.2.1 after Paragraph 10.2.2:

10.2.2.1 In the event that review, inspection or other action by regulatory agencies or other parties results in the imposition of fines, fees, or other costs due to the failure of the Contractor to comply with said applicable laws, ordinances, rules, regulations and lawful orders, the Contractor shall hold harmless the Owner, the Architect, and Owner's separate contractors, if any, from all consequences arising from the Contractor's noncompliance.

§ 10.4 EMERGENCIES

Add the following sentence to Section 10.4:

"Nothing in this paragraph shall be construed as relieving the Contractor from the cost and responsibility for emergencies covered hereby, which with normal diligence, planning, and the close supervision of the Work as required under the Contract, could have been foreseen or prevented."

ARTICLE 11 INSURANCE AND BONDS

Delete the semicolon at the end of Subparagraph 11.1.1.1 and add:

"...including private entities performing Work at the site and exempt from the coverage on account of number of employees or occupation, which entities shall maintain voluntary compensation coverage at the same limits specified for mandatory coverage for the duration of the Project."

Delete the semicolon at the end of Subparagraph 11.1.1.2 and add:

"... or persons or entities excluded by statute from the requirements of Section 11.1.1.1 but required by the Contract Documents to provide the insurance required by that section;"

Add Sections 11.1.2.1 through 11.1.2.5 to Section 11.1.2:

11.1.2.1 The Limits for Worker's Compensation and Employers' Liability insurance shall meet statutory limits mandated by State and Federal Laws. If (1) limits in excess of those required by statute are to be provided or (2) the employer is not statutorily bound to obtain such insurance coverage or (3) additional coverages are required, additional coverages and limits for such insurance shall be as follows:

11.1.2.2 The limits for Commercial General Liability insurance including coverage for Premises Operations (deleting X C or U exclusions), Independent Contractors' Protective, Products-Completed Operations, Contractual Liability, Personal Injury and Broad Form Property Damage (including coverage for Explosion, Collapse and Underground hazards) shall be as follows:

\$500,000.00 Each Occurrence

\$1,000,000.00 General Aggregate

\$500,000.00 Personal and Advertising Injury

\$1,000,000.00 Products-Completed Operations Aggregate

- .1 The policy shall be endorsed to have the General Aggregate apply to this Project only.
- .2 The Contractual Liability insurance shall include coverage sufficient to meet the obligations in AIA Document A201-2007 under Paragraph 3.18.
- .3 Products and Completed Operations insurance shall be maintained for a minimum period of at least one year after either 90 days following Substantial Completion or final payment, whichever is earlier.

11.1.2.3 Automobile liability insurance (owned, non-owned and hired vehicles) for bodily injury and property damage shall be as follows: \$500,000.00 Each Accident

11.1.2.4 Umbrella or Excess Liability coverage shall be as follows: \$1,000,000.00

11.1.2.5 Should the Contractor have any outstanding claim against his/her current insurance policies, he/she shall increase the dollar amount of insurance coverage above that specified by the dollar amount of the outstanding claim.

Add the following Subparagraphs 11.1.3.1 and 11.1.3.2 to Paragraph 11.1.3:

11.1.3.1 If this insurance is written on a Commercial General Liability policy form, the certificates shall be ACORD form 25-S, completed and supplemented in accordance with AIA Document G715, Instruction Sheet and Supplemental Attachment for ACORD Certificate of Insurance 25-S.

11.1.3.2 Certificates of Insurance shall show the additional insured as Union County Public Schools, Monroe, NC 28112. The Certificate shall also contain a special notation naming the Architect as being additionally insured on the liability coverage.

Add Subparagraphs 11.1.5, 11.1.5.1, and 11.1.5.2 following Paragraph 11.1.4:

11.1.5 The Contractor shall furnish one copy of each Certificate of Insurance herein required attached to each copy of the Agreement, plus three additional copies of each Certificate of Insurance herein required, which shall specifically set forth evidence of all coverage required by Sections 11.1.1, 11.1.2, and 11.1.3.

- .1 The Contractor shall furnish to the Owner copies of any endorsements that are subsequently issued amending coverage or limits, including an endorsement requiring 30 days written notice to the Owner of such amendment or cancellation of coverage or limits.
- .2 The Contractor shall furnish to the Owner a copy of the Insurance Policy prior to the first Application for Payment.

§ 11.3 PROPERTY INSURANCE

Delete Subparagraph 11.3.1.2 and replace with the following:

11.3.1.2 Contractor shall provide the Property Insurance coverage in a form acceptable to the Owner. Insurance shall be written on the Commercial Property Special form or an Inland Marine 'All Risk' form to cover 100 percent of the value of the completed work.

- .1 Contractor shall furnish a Certificate of Insurance and associated Coverage Form within 10 days of Notice to Award Contract; furnish a copy of the policy to the Owner prior to request for initial payment, but not later than 30 days following Award of Contract or Notice to Proceed, whichever is issued first.
- .2 Policies shall carry an endorsement to provide 30 day written notice of cancellation to the Owner.

Add Subparagraph 11.3.1.6 to Subparagraph 11.3.1:

11.3.1.6 The insurance required by Paragraph 11.3 is not intended to cover machinery, tools or equipment owned or rented by the Contractor that are utilized in the performance of the Work but not incorporated into the permanent improvements. The Contractor shall, at the Contractor's own expense, provide insurance coverage for owned or rented machinery, tools or equipment, which shall be subject to the provisions of Subparagraph 11.3.7.

§ 11.4 PERFORMANCE BOND AND PAYMENT BOND

Delete Paragraph 11.4.1 in its entirety and insert new Paragraph 11.4.1 and Subparagraphs 11.4.1.1 and 11.4.1.2:

§ 11.4.1 Upon execution of the Contract Documents, the Contractor shall furnish to the Owner a Performance Bond and a separate Labor and Material Payment Bond, acceptable to the Owner and underwritten by a surety authorized to do business in North Carolina, each in an amount equal to 100 percent of the Contract Sum for each bond. The bonds shall guarantee the Contractor's faithful performance of the Contract and payment of all obligations arising thereunder. The bonds shall remain in force until the Work has been completed and accepted by the Owner, the provisions of all guarantees required by these Contract Documents have been fulfilled, and the warranty periods and period for correction of the Work have expired, or the period for filing mechanics' liens has expired, whichever occur latest, after which time the bonds shall lapse. The Contractor shall bear all costs in connection with the bonds as a part of the Contract. One executed copy of each bond shall be attached to each executed copy of the Contract Documents prior to the execution of the Contract Documents by the Owner.

- .1 These bonds shall be furnished to the Owner in the "Standard Form of Performance Bond and Labor and Material Payment Bond", AIA Document A302, latest edition.
- .2 The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.2 CORRECTION OF WORK

Add Subparagraph 12.2.2.1.1 to Subparagraph 12.2.2.1:

12.2.2.1.1 Leakproof Envelope Provision: The one-year period for correction of Work shall be extended to a two-year period for all exterior envelope elements of the Work should one or more fail to serve as a leakproof water and/or air barrier. The Contractor's responsibility under this Section shall extend to the repair of all damage to the building and building contents resulting from such failure.

Delete the words "one-year" from Subparagraphs 12.2.2.2 and 12.2.2.3.

Add Subparagraph 12.2.2.4 to Paragraph 12.2.2:

12.2.2.4 Upon request by the Owner and prior to the expiration of one year from the date of Substantial Completion, the Architect will conduct and the Contractor shall attend a meeting with the Owner to review the facility operations and performance of the Work of the Contractor.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

Add the following sentence to the end of Paragraph 12.3:

"The acceptance of nonconforming Work by the Owner shall be by written Change Order or Construction Change Directive, signed by the Owner's authorized representative. No person has authority to accept nonconforming work except the Owner."

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1.5 CLAIMS FOR ADDITIONAL TIME

Add Subparagraphs 15.1.5.3, 15.1.5.4, and 15.1.5.5 after Subparagraph 15.1.5.2:

15.1.5.3 Claims for increases in the Contract Time shall set forth in detail the circumstances that form the basis for the Claim, the date upon which each cause of delay began to affect the progress of the Work, the date upon which each cause of delay ceased to affect the progress of the Work, and the number of days' increase in the Contract Time claimed as a consequence of each such cause of delay. The Contractor shall provide such supporting documentation as the Owner may require including, where appropriate, a revised construction schedule indicating all the activities affected by the circumstances forming the basis of the Claim.

15.1.5.4 The Contractor shall not be entitled to a separate increase in the Contract Time for each one of the number of causes of delay which may have concurrent or interrelated effects on the progress of the Work, or for concurrent delays due to the fault of the Contractor, or for delays not affecting tasks not identified as critical tasks affecting the date of completion of the Work.

15.1.5.5 The Contractor has the option to purchase such insurance and riders to his insurance (Inland Marine Floater policies to Builders Risk Insurance to cover the following potential losses: Theft, Business Interruption, Extra Expense, Installation, Contractors Equipment) as he deems prudent to cover possible losses due to acts of God (force majeure) including loss of income and financial damages due to loss of income caused by delays in construction from a covered peril. This option shall be the Contractor's sole remedy for damages not a result of Owner, Architect, Contractor or their agents' actions, omissions, or failures to take action. The Contractor agrees to make no claim for damages for delay in the performance of this Contract and agrees that any such claim shall be fully compensated for by an extension of time to complete performance of the Work as provided under the change order provisions of Article 7.

Add Paragraph 15.2.9 as follows:

§ 15.2.9 Alternative Dispute Resolution: If a dispute occurs between the Owner and Contractor arising out of or relating to the contract or an alleged breach thereof, the Owner and Contractor agree to attempt to resolve the dispute by engaging in good faith negotiations. If the dispute cannot be resolved by negotiation, the owner and the contractor agree as a condition precedent to commencing a lawsuit to submit the dispute to the following methods of alternative dispute resolution:

- .1 Mediation: pursuant to Constructions Rules of the American Arbitration Association.
- .2 Arbitration: pursuant to the Arbitration Rules of the American Arbitration Association.
- .3 The award rendered by the arbitrator or arbitrators shall be final unless a party thereto gives written notice of its objection to the final award by arbitration within twenty (20) days from receipt of said decision. Upon giving of said notice the party objecting thereto may file suit concerning the dispute as if no arbitration had ever occurred."

Add Article 16 as follows:

ARTICLE 16: LIQUIDATED DAMAGES

§ 16.1 The Owner and Contractor recognize that time is of the essence to this Contract, and that a delay in achieving Substantial Completion or Final Completion is a breach and will necessarily cause damages to the Owner. Such damages include but are not limited to:

- .1 Delayed or diminished use of public facility
- .2 Inconvenience to students, staff and public
- .3 Increased inspection, oversight and administrative costs to the Owner
- .4 Diversion of the Owner's employees from other tasks and projects
- .5 Increased and extended project overhead
- .6 Inefficiencies and loss of productivity

§ 16.2 All parties acknowledge that said damages are likely to occur but would be difficult to ascertain or determine, and that a legal proceeding to prove such damages would be time consuming and expensive. Therefore, in the event of delayed performance the following amounts will be charged against the Contractor, as liquidated damages and not as a penalty:

- .1 The amount of \$1,000.00 per calendar day for failing to meet the Substantial Completion Date, calculated until substantial completion is actually achieved; and
- .2 The amount of \$500.00 per calendar day for failing to meet the Final Completion Date, calculated until final completion is actually achieved.

§ 16.3 The above amounts for liquidated damages are separate and cumulative. They are calculated concurrently in the event Substantial Completion is not achieved until after the specified Final Completion Date. All parties agree

SECTION 01 11 00
SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS and REQUIREMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all Divisions of the Technical Specifications, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: Union County Public Schools
Monroe High School Roof Renovation Project
1 High School Dr
Monroe, NC 28112
- B. Consultant Identification: The Contract Documents, dated June 2023, were prepared for the Project by Wolf Trail Engineering, PLLC.
- C. The work consists of:
 - 1. Existing Conditions:
 - a. The building is occupied and will remain occupied during construction.
 - b. The existing roof area (02.02) consists of a metal deck, tapered isocyanurate insulation and a fully adhered TPO membrane.
 - c. The existing roof areas (02.03, 02.07, 02.08) consist of a metal deck, 3” isocyanurate insulation, and a fully adhered TPO membrane.
 - d. The existing roof area (02.09) consists of a metal deck, 2” fiberglass insulation, one-half inch (1/2”) gypsum board, 3” isocyanurate insulation, and a fully adhered TPO membrane.
 - e. The existing canopy roof area (01.26, Section B) consists of a preformed metal roof. There are no roof membranes currently installed on this roof.
 - f. The existing roof areas (02.03, 02.07, 0 2.08, 02.09) have structural slope with crickets and saddles as needed.

2. Demolition:

- a. Roof areas (02.02, 02.03, 02.07, 02.08, 02.09)
 - 1) Remove insulation in areas indicate as thermal (wet) insulation and replace to match existing insulation height.
 - 2) Remove twelve-inch (12") strips at forty-eight inches (48") on center of the existing TPO membrane.
- b. Roof Area 02.03:
 - 1) Remove existing brick masonry in four-foot sections to expose through wall flashing in specified area. Repeat as required.
- c. Masonry wall at Roof Area 02.09:
 - 1) Remove existing metal flashing at brick ledge around perimeter of gymnasium.
 - 2) Cut EIFS around perimeter to allow for new flashing as specified herein and as shown in the project drawings.
- d. Roof Area 1.26 Section B:
 - 1) Remove existing metal deck, gutter, and downspouts. All structural steel is to remain in place.

3. Renovation/New Construction

- a. Roof areas 02.03, 02.07, 02.08
 - 1) Mechanically attach a new two-inch (2") layer of isocyanurate insulation as required to meet minimum uplift requirements per UL or FM Global. Install the new cover board in foam insulation adhesive per detail drawings. Install new fully adhered PVC membrane and flashings as specified herein and as shown in the project drawings as required by the manufacturer for a twenty-year (20) NDL Manufacturer's Warranty.
- b. Roof Area 02.02
 - 1) Mechanically attach a new cover board as required to meet minimum uplift requirements per UL or FM Global. Install new fully adhered PVC membrane and flashings as specified herein and as shown in the project drawings as required by the manufacturer for a twenty-year (20) NDL Manufacturer's Warranty.
 - 2) Install new through wall flashings as specified herein and as shown in the project drawings (Roof Area 02.03).

- c. Roof Area 02.09
 - 1) Mechanically attach a new one-inch (1”) layer of isocyanurate insulation as required to meet minimum uplift requirements per UL or FM Global. Install the new cover board in foam insulation adhesive per detail drawings. Install new fully adhered PVC membrane and flashings as specified herein and as shown in the project drawings as required by the manufacturer for a twenty-year (20) NDL Manufacturer’s Warranty.
 - 2) Install new metal cap flashing at brick ledge around perimeter of gymnasium wall.
 - 3) Repair EIFS as specified herein and as shown in the project drawings.
 - 4) Coat perimeter of Gymnasium EIFS wall surface.
- d. Roof Area 01.26 Section B
 - 1) Mechanically attach a new acoustic metal deck as specified herein and as shown in the project drawings.
 - 2) Adhere a one-half-inch fiber reinforced silicon impregnated primed gypsum cover board in foam insulation adhesive to meet a minimum uplift requirements per UL or FM Global.
 - 3) Fully adhere a bare back PVC membrane.
- e. All Roof Areas
 - 1) Install roof accessories as specified. See Sheet RA01.
 - 2) Install new pre-finished metal accessories and trim as indicated on the detail drawings per manufacturer’s specifications.

1.3 WORK SEQUENCE

- A. The Work shall be conducted in phases as described above in the work summary.
 - 1. Phase-1: Removal of existing components and installation of waterproofing materials.
 - 2. Phase-2: Install the new roof assembly components as specified herein and as shown on the project drawings.

PART 2 - PRODUCTS

2.1 PRODUCTS ORDERED IN ADVANCE

- A. Unless otherwise stated in the Contract Documents, Costs for receiving, handling, storage if required, and installation of material and equipment shall be included in the Contract Sum.

2.2 OWNER-FURNISHED PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 11 00

SECTION 01 14 00
WORK RESTRICTIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all Divisions of the Technical Specifications, apply to this Section.

1.2 USE OF PREMISES

- A. Use of Site: Limit use of premises to work in areas indicated on the drawings. Do not disturb portions of site beyond areas in which the Work is indicated.
 - 1. Limits: Confine constructions operations to areas indicated during the pre-construction meeting. After the pre-construction meeting, maps will be provided to indicate the area of operation by awarded contractor.
 - 2. Owner Occupancy: Allow for Owner's use of facility during construction.
 - 3. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
 - 4. Construction hours shall be as follows: Hours to be determined at Pre-Bid Meeting
 - a. Unless specifically noted otherwise, construction hours shall be during normal business hours.
 - 1) Normal business hours are defined as occurring Monday through Saturday between the times of 8:00am to 5:00pm.
 - 2) Normal business hours do not include nationally recognized holidays in which the Owner is not occupying the building.

1.3 OCCUPANCY REQUIREMENTS

- A. Owner Occupancy: Owner reserves the right to occupy this building during all phases of the project.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 14 00

SECTION 01 21 00
CONTINGENCY AND ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all Divisions of the Technical Specifications, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing allowances. The Contingency shall be part included in the total contract amount.
- B. Types of allowances include the following:
 - 1. Contingency \$ 25,000
(For a non-specific item)-Place dollar amount here and on Bid Form
- C. Related Sections include the following:
 - 1. Division 1, Technical Specifications Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.3 SELECTION AND PURCHASE

- A. At the earliest practical date after award of the Contract, advise Consultant of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Consultant's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Consultant from the designated supplier.

1.4 SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, on the "Proposal Request" and "Proposal Request Log" forms.

- B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

1.5 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by Consultant for Owner's purposes and amount(s) to be charged to the allowance.
- B. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES (Not Used)

END OF SECTION 01 21 00

SECTION 01 22 00
UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.
- B. Related Sections include the following:
 - 1. Division 1, of the Technical Specifications Section "Allowances" for procedures for using unit prices to adjust quantity allowances.
 - 2. Division 1, of the Technical Specifications Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
 - 3. Division 1, of the Technical Specifications Section "Quality Requirements" for general testing and inspecting requirements.

1.2 DEFINITIONS

- A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, taxes, overhead, and profit.
- B. Measurement and Payment: Refer to individual Technical Specifications Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent agent.
- D. List of Unit Prices: A list of unit prices is included at the end of this of the Technical Specifications Section. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

Attach to Bid Attach to Bid

PART 2 - PRODUCTS

2.1 LIST OF UNIT PRICES

<u>UNIT PRICE</u>	<u>COST/UNIT</u>
UP – 1 Fire Treated Wood Blocking & Installation	\$ _____ per bd. / ft.

END OF SECTION 01 22 00

SECTION 01 23 00
ALTERNATES

PART 1 – GENERAL

1.1 SCOPE

- A. The following items are to be included as Alternate Work under the Contract and a price for each item shall be entered in the Bid Form in the spaces provided for Bid Alternates.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.3 SUMMARY

- A. This Section specifies administrative and procedural requirements for Alternates.
- B. Definition: An alternate is an amount proposed by Bidders and stated on the Bid Form for certain construction activities defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems or installation methods described in Contract Documents.
- C. Coordination: Coordinate related work and modify or adjust adjacent work as necessary to ensure that the Work performed by each accepted Alternate is complete and fully integrated into the Project.
- D. Include as part of each Alternate, miscellaneous devices, accessory object and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.
- E. The Bidder shall quote all-inclusive deductive or added costs for proposed Bid Alternates to the Project scope listed on the Bid Form. The Bidder shall provide a quote for all proposed Bid Alternates. Quoted Bid Alternates shall include the costs for all work, including Contractor's direct and indirect costs and fees, proposed to be added or deleted from the scope of the Project and all work, including all costs and fees, required to fully execute the proposed substitute Project scope.
- F. Owner reserves the right to accept or reject any Bid Alternate. The Owner may, at its option, exercise alternate(s) no later than insert date. add by Change Order(s) to the Work to be performed under the Contract Documents, the Work contemplated by the Alternates, any of them, or any combination of them, at the Alternate pricing as listed on the Bid Form – Section 00 41 00.
- G. Acceptance or non-acceptance of any Bid Alternates by the Owner shall have no effect on the Contract Period, Date of Substantial Completion, or Date of Final Completion.

PART 2 – SCHEDULE OF ALTERNATES (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 01 23 00

SECTION 01 25 00
SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. During bidding period, the Bidders shall comply with the substitution request procedures specified in Section 00 26 00 - Procurement Substitution Procedures. This Section specifies administrative and procedural requirements for handling requests for substitutions proposed by the Contractor after the award of the Contract.
- B. The substitution process is available as a means to promote fair and open procurement by the Union County Board of Education and not to provide the Contractor the opportunity to substitute products of an inferior quality. To that end, the Owner reserves the right to reject a product not deemed equal to the product specified; charge the Contractor for the Additional Services, if required, of the Engineer; or require an equitable credit for the substituted product.
- C. This section specifies administrative and procedural requirements for handling requests for substitutions made after award of the Contract.
- D. Procedural requirements governing the Contractor's selection of products and product options are included in Section 01 60 00 Product Requirements.

1.2 DEFINITIONS

- A. Definitions used in the Article are not intended to change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor after award of the Contract are considered requests for "substitutions". The following are not considered substitutions:
 - 1. Revisions to Contract Documents requested by the Owner or Engineer.
 - 2. Specified options of products and construction methods included in Contract Document.
 - 3. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

1.3 SUBMITTALS

- A. Substitution Request Submittal: Requests for substitution will be considered if received within thirty (30) days after the Notice to Proceed, or Letter of Intent, whichever comes first. Requests received more than thirty (30) days after the commencement of the work may be considered or rejected at the discretion of the Engineer. Substitution items submitted without requests will be rejected.

1. Submit three (3) copies of each request for substitution for consideration. Submit requests in the form and in accordance with the procedures required for change order proposals.
2. Clearly indicate on the transmittal that the product being submitted is a substitution. Do not include on the same transmittal any product that is not a substitution.
3. Provide a credit change order proposal if the substitution is intended to provide the Owner a product of a lesser value than the value of the specified product.
4. Identify the product or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide complete documentation showing compliance with the requirements for substitutions and the following information as appropriate:
 - a. Product Data, including Drawings and descriptions of products, fabrications, and installation procedures.
 - b. Samples, where applicable or requested.
 - c. A detailed comparison of significant qualities of the proposed substitution with those for the Work specified. Significant qualities may include elements such as size, weight, durability, performance, and visual effect.
 - d. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate Contractors, which will become necessary to accommodate the proposed substitution.
 - e. A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
 - f. Certification by the Contractor that the substitution proposed is equal to or better in every significant respect to that required by the Contract Documents and that it will perform adequately in the application intended. Include the Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.
 - g. Cost information, including a proposal of the net change, if any in the contract sum.
5. Engineer's Action: The Engineer may request additional information or

documentation necessary for evaluation of the request. The Engineer will notify the Contractor of acceptance or rejection of the proposed substitution. If a decision on use of a proposed substitute cannot be made, use the product specified by name.

1.4 PROCEDURES

- A. Reference in the project manual or on the drawings to an article device, product, material, fixture, form or type of construction by name, make or catalog number (product or method) whether or not followed by “or equal” establishes a standard of quality, and does not eliminate from competition other products or methods of equal or better quality by other manufacturers, where fully suitable, as approved by the Engineer. Applications for approval of substitutions for the specified products or methods will be considered only upon request of the Contractor, not of Subcontractors individual trades or suppliers, and only for a specific purpose; no blanket approvals will be granted. No approval of a substitution will be valid unless it is in written form.
- B. If a proposed substitution affects a correlated function, adjacent construction, or the Work of other Contractors, then the necessary changes and modifications to the affected Work are considered an essential part of the proposed substitution, to be accomplished by the Contractor as a part of the Work, if and when approved. Submit detailed drawings and other information necessary to show and explain the proposed modifications with the request for approval of the substitution. The Contractor agrees to include data to substantiate that the proposed substitution is in compliance with the Contract Documents and that the operation and maintenance costs are equal to or less than those for the named products.
- C. No substitutions will be allowed when the phrase “no substitutions” or “no substitutions will be allowed” or words or similar effect, is specified or indicated with products or methods or when three or more manufacturers, suppliers, or products are specified, without the words “or equal.”
- D. The following information is required if, the Contractor desires to submit a substitute product or method in lieu of what has been specified or shown in the Contract Documents:
 - 1. Full explanation of the proposed substitution and submittal of all supporting data including technical information, catalog cuts, warranties, performance and test results, installation instruction, operating procedures, samples where applicable and other like information necessary for a complete evaluation of the substitution and an itemized comparison of the proposal substitution with the product specified relating to such thing as capacities, operation, functions, dimensions, construction details, methods of assembly connections installation, design and artistic effect where applicable and relationship to other Prime separate contracts.

2. Reasons the substitution is advantageous and necessary, including the benefits to the Owner and the Work in the event the substitution is acceptable.
 3. The adjustment, if any, the Contract Sum, in the event the substitution is acceptable. Each substitution must be accompanied by accurate cost data on proposed substitution in comparison with specified product whether or not a Contract sum modification is to be a consideration.
 4. The adjustment, if any, in the time of completion of the Contract and the Construction Schedule in the event the substitution is acceptable. Any delays to other Primes must be taken into consideration with any substitution request. Delay damages will be paid by for by the Party requesting a substitution who will hold the Owner and Engineer harmless for any delay damages arising out of approval of a substitution.
- E. An affidavit stating that (1) the proposed substitution conforms and meets all the requirements of the pertinent Specifications and the requirements shown on the Drawings and (2) the Contractor accepts the warranty and correction obligations in connection with the proposed substitution as if originally specified by the Engineer, (3) represents that he or she personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that which is specified; and will provide the same guarantee for the substitution that would otherwise be provided for the product which is specified: (4) Certifies that the cost data presented is complete and includes all related costs under this Contract, but excludes costs under separate contracts and the Engineer's re-design costs, and that he or she waives all claims for additional costs related to the substitution which subsequently became apparent: (5) will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.
- F. Proposals for substitutions shall be submitted in triplicate to the Engineer in sufficient time to allow the Engineer no less than ten (10) working days for review before a product will be ordered to allow delivery on the date required by the schedule but in no case less than fifteen (15) days after the date of the date of execution of the Contract. No substitutions will be considered or allowed without the Contractor's submittal of complete substantiating data and information as stated hereinbefore.
- G. Substitutions will not be considered without the formal request as required in accordance with the contract terms.
- H. Substitutions and alternates may be considered only if:
1. Required for compliance with building code requirements or insurance regulations then existing.
 2. Specified products are unavailable, through no fault of the Contractor.
 3. Subsequent information discloses that specified products will not perform properly or fit in designated space.

4. A manufacturer/fabricator refuses to certify or guarantee performance of a specified product as required or.
 5. In the judgment of the Owner or the Engineer, a substitution would be substantially in the Owner's best interest, in terms of cost, time or other considerations.
- I. In the case of Contractor-proposed substitutions which fail to meet the requirements of the Contract Documents, the Contractor shall, at the sole election of the Owner, reimburse the Owner for any fees charged by the Engineer or other consultants for evaluating each such proposed substitute.
 - J. No change in brand or make will be permitted unless (i) satisfactory written evidence is presented to demonstrate that the manufacturer cannot make scheduled delivery of an approved item and that such delivery failure will adversely affect the project's critical path, (ii) the item delivered has been rejected and the substitution of suitable item is required to maintain the project's critical path, or (iii) other conditions have become apparent which indicate that approval of such other material is, in the sole opinion of the Engineer, in the best interest of the Owner.

PART 2 – PRODUCTS

2.1 SUBSTITUTIONS

- A. Conditions: The Contractor's substitution request will be received and considered by the Engineer when all of the following conditions are satisfied, as determined by the Engineer; otherwise, requests will be returned without action except to record noncompliance with these requirements.
 1. Extensive revisions to Contract Documents are not required
 2. Proposed changes are in keeping with the general intent of Contract Documents
 3. The request is timely, fully documented and properly submitted.
 4. The request is directly related to an "or-equal" clause or similar language in the Contract Documents.
 5. Where a proposed substitution involves more than one (1) prime Contractor, each Contractor shall cooperate with the other Contractors involved to coordinate the Work, provide uniformity and consistency and to assure compatibility of products.
 6. The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
 7. A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations or merit, after deducting offsetting

responsibilities the Owner may be required to bear. Additional responsibilities for the Owner may include additional compensation to the Engineer for re-design and evaluation services, increased cost of other construction by the Owner or separate Contractors and similar considerations.

- B. The contractor's submittal and Engineer's acceptance of Shop Drawings, product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an approval or valid request for substitution.

Part 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 01 26 00
CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all Divisions of the Technical Specifications, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications whereas all parties agree to the following:
 - 1. A modification in the Work or Contract Documents.
 - 2. The amount of the adjustment in the Contract Sum, if any.
 - 3. The extent of the adjustment in the Contract Time, if any.

1.3 NOTIFICATION TO SURETY

- A. The Contractor shall notify the Surety of any modifications to the Work or provisions of the Contract Documents, including, but not limited to, the Contract Price or Contract Time.

1.4 MINOR CHANGES IN WORK

- A. The Engineer shall have authority to order Minor Changes in the Work not involving adjustment to the Contract Sum or extension of the Contract Time, and consistent with the intent of the Contract Documents. Such changes shall be in the form of a written order and shall be binding for both the Owner and Contractor when fully executed.

1.5 CLAIMS FOR ADDITIONAL COST:

- A. No claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with the following:

1. Notice: Written notice stating the general nature of each claim shall be delivered by the claimant to the other party to the Contract promptly, but in no event later than thirty (30) days after the start of the event giving rise to the claim.
 2. The responsibility to substantiate a claim shall rest with the party making the claim. The amount or extent of the claim, with supporting data, shall be delivered to the other party to the Contract within fifteen (15) days after the initial Notice of the Claim. Each claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to the claimant within thirty (30) days after receipt of the claimant's last submittal. Prior notice is not required for Claims relating to an emergency endangering life or property.
- B. The Contractor shall submit a claim if he believes additional cost is involved for reasons including but not limited to the following:
1. A written interpretation from the Engineer,
 2. An order by the Owner to stop the Work where the Contractor was not at fault.
 3. A written order for a minor change in the Work issued by the Engineer,
 4. A change in the Scope of the Work by the Engineer.

1.6 PROPOSAL REQUESTS

- A. The Owner initiated Proposal Requests is generated by the Owner to modify the Work or Contract Documents. The Engineer will issue a detailed description of proposed modifications in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications. The description is for information and shall be considered as a directive to automatically stop work or execute the proposed change.
1. Within ten 10-calendar days after receipt of the Proposal Request, the Contractor shall submit a Proposal Request Form with an estimate to adjust the Contract Sum and the Contract Time if necessary to execute the change. Proposal shall include support documents from Subcontractor, if applicable.
 - a. Include a list of quantities of (plus or minus) the materials and/or products required with unit prices, total amount of purchases, and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

- c. Include costs of labor and supervision directly attributable to the change, including social security, old age and unemployment insurance, fringe benefits, and workmen's compensation insurance.
 - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start, and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 2. The Contractor may initiate proposals if latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Engineer.
 - a. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - b. Include a list of quantities of (plus or minus) the materials and/or products required with unit prices, total amount of purchases, and credits to be made. If requested, furnish survey data to substantiate quantities.
 - c. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - d. Include costs of labor and supervision directly attributable to the change, including social security, old age and unemployment insurance, fringe benefits, and workmen's compensation insurance.
 - e. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - f. Comply with requirements in Division 1 Section, of the Technical Specifications "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.
- B. An alternative method to price the changes in the work is to utilize current "Mean's Cost Data"
- C. Profit and Overhead shall not exceed ten percent (10%) of the cost of the changes to the Work.
- D. Use Proposal Request Form provided by Owner. A Sample is included under Project Manual Heading VII - Forms. The Contractor shall prepare three copies, one for the

Engineer, one for the Owner and one for himself and for all parties to sign. Each shall keep a copy.

- E. The Contractor shall be responsible for keeping and updating a "Proposal Request Log", listing all Proposal Requests and Minor Changes. The log shall also indicate the date of the Proposal Request, approval date, action taken, running balances, and a complete description of the change.
- F. After all parties have signed "The Proposal Request Form", it shall be the Contractor's authorization to proceed with the changes to the Work.
- G. If the Owner and Contractor do not agree with the requested adjustment in the Contract Sum, the Contract Time or the method of determining each, the provisions for Mediation shall be utilized.

1.7 CHANGE ORDER PROCEDURES

- A. The Engineer shall issue a Change Order for signatures once all the Proposal Request(s) amounts exceeds the contingency amount or at the end of the project.
- B. The Contractor shall not invoice for the Change Order until it has been executed by all parties.

1.8 CONSTRUCTION CHANGE DIRECTIVE

- A. The Engineer may issue a Construction Change Directive that has been signed by the Owner to the Contractor directing a change in the Work. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. 1. Work Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved. And the Contractor shall advise the Engineer of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.
- C. The Contractor shall maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PROCESSING CHANGE ORDERS

- A. The Change Order request will be issued describing the change or changes to the Work and/or Contract Documents and will refer to the Proposal Requests.
- B. The Contractor shall issue one copy of the Change Order request to the Engineer. The Engineer shall promptly sign the copy and return the copy to the Owner who will sign the Change Order request and forward the Change Order to the Contractor to execute.
- C. Once the Change Order has been fully executed, a copy shall be forwarded to the Engineer and to the Contractor for their files.

END OF SECTION 01 26 00

SECTION 01 29 00
PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all Divisions of the Technical Specifications, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
 - 1. Division 1, of the Technical Specifications Section "Allowances" for procedural requirements governing handling and processing of allowances.
 - 2. Division 1, of the Technical Specifications Section "Unit Prices" for administrative requirements governing use of unit prices.
 - 3. Division 1, of the Technical Specifications Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 4. Division 1, of the Technical Specifications Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.

1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms AIA G702.
 - b. Continuation Sheets
 2. Submit the Schedule of Values to the Engineer at earliest possible date but no later than fourteen days before the date scheduled for submittal of initial Applications for Payment.
 3. Sub-schedules: Where the Work is separated into phases requiring separately phased payments, provide sub-schedules showing values correlated with each phase of payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each of the Technical Specifications Section and line item for potential billing against the Construction Contingency Allowance.
1. Identification: Include the following Project information on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Engineer.
 - c. Contract number.
 - d. Purchase Order number.
 - e. Contractor's name and address.
 - f. Date of submittal.
 2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Technical Specifications Section or Division.
 - b. Description of the Work.
 - c. Name of subcontractors.
 - d. Name of manufacturer or fabricator.
 - e. Name of suppliers.

- f. Change Orders (numbers) that affect value.
 - g. Dollar value.
3. Group items that are “Non-Tangible & Non-Taxable and Tangible & Taxable Items” on the Schedule of Values.
 4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
 5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 6. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include labor and materials and/or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing if required.
 7. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 8. Closeout documentation: Provide a separate line item in the Schedule of Values for close out documentation as set forth in the Supplementary Conditions.
 9. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
 10. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Engineer and paid for by Owner.

1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involves additional requirements.
- B. Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for material and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such material and equipment or otherwise protect the Owner's interest, and shall include applicable insurance, storage and transportation to the site for such material and equipment stored off the site.
 - C. The Contractor warrants that title to all Work covered by an Application and Certificate for payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application and Certificate for payment all work for which Certificates for payment have been previously issued and payment received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of claims of liens, claims, security, interests, or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work.
 - D. Payment Application Times: Each Month, the Owner can make a partial payment to the Contractor on the basis of a duly notarized Application and Certification for Payment approved and certified by the Engineer.
 - E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. The Engineer will return incomplete applications without action.
 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
 3. The Owner shall retain five(5%) percent of each payment to up fifty (50%) percent completion of the Contract.
 - a. The Owner shall not retain more than ten percent (10%) of any periodic payment due a prime Contractor.
 - b. When the project is fifty percent (50%) complete, the Owner, with written consent of the surety, shall not retain any further retainage from periodic

payments due the Contractor if the Contractor continues to perform satisfactorily and any nonconforming work identified in writing prior to that time by the Engineer or Owner has been corrected by the Contractor and accepted by the Engineer and Owner. If the Engineer determines the Contractor's performance is unsatisfactory, the Owner may reinstate retainage for each subsequent periodic payment application as authorized in this subsection up to the maximum amount of ten percent (5%). The project shall be deemed fifty percent (50%) complete when the Contractor's gross project invoices, excluding the value of materials stored off-site, equal or exceed fifty percent (50%) of the value of the contract, except the value of materials stored on-site shall not exceed twenty percent (20%) of the Contractor's gross project invoices for the purpose of determining whether the project is fifty percent (50%) complete.

- c. Within 60 days after the submission of a pay request and one of the following occurs, as specified in the contract documents, the Owner with written consent of the surety shall release to the Contractor all retainage on payments held by the Owner:
 - 1) The Owner receives a certificate of substantial completion from the Engineer in charge of the project; or (ii) the Owner receives beneficial occupancy or use of the project. However, the Owner may retain sufficient funds to secure completion of the project or corrections on any work. If the Owner retains funds, the amount retained shall not exceed two and one-half times the estimated value of the work to be completed or corrected. Any reduction in the amount of the retainage on payments shall be with the consent of the Contractor's surety.
- d. The existence of any third-party claims against the Contractor or any additive change orders to the construction contract shall not be a basis for delaying the release of any retainage on payments.
 - 1) Full payment, less authorized deductions, shall also be made for those trades that have reached one hundred percent (100%) completion of their contract by or before the project is fifty percent (50%) complete if the Contractor has performed satisfactorily. However, payment to the early finishing trades is contingent upon the Owner's receipt of an approval or certification from the Engineer of record or applicable engineer that the work performed by the subcontractor is acceptable and in accordance with the contract documents.
 - 2) Neither the Owner's nor Contractor's release of retainage on payments as part of a payment in full on a line-item of work under 3-d of this section shall affect any applicable warranties on work done by the Contractor or subcontractor, and the warranties shall not begin to run

any earlier than either the Owner's receipt of a certificate of substantial completion from the Engineer in charge of the project or the Owner receives beneficial occupancy.

- e. Nothing in this section shall prevent the prime Contractor at the time of application and certification to the Owner from withholding application and certification to the Owner for payment to the subcontractor for unsatisfactory job progress; defective construction not remedied; disputed work; third party claims filed or reasonable evidence that claim will be filed; failure of subcontractor to make timely payments for labor, equipment, and materials; damage to prime Contractor or another subcontractor; reasonable evidence that subcontract cannot be completed for the unpaid balance of the subcontract sum; or a reasonable amount for retainage not to exceed the initial percentage retained by the Owner.
- f. Nothing in this section shall prevent the Owner from withholding payment to the Contractor in addition to the amounts authorized by this section for unsatisfactory job progress, defective construction not remedied, disputed work, or third-party claims filed against the Owner or reasonable evidence that a third-party claim will be filed.

4. Provide a separate line item in the Schedule of values for close out documentation.

- F. Transmittal: Submit one (1) original signed and notarized copy of each Application for Payment to the Engineer.
 - 1. An original signed copy by Vendor and Engineer must be sent to Accounts Payable on every pay app by the Engineer. Address for Accounts Payable to be on the PO.
- G. With each Application and Certification for payment, the Contractor must furnish for themselves, as well as for all Subcontractors, certified statements stating the cost of the property purchased from each vendor and the amount of sales and/or use taxes paid. See General Conditions, Sales and Use Tax for additional information.
- H. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
- I. Neither Final payment nor any remaining retained percentage shall become due until the Contractor submits the following to the Engineer for approval:

1. An affidavit that payrolls, bills for material and other indebtedness connected with the Work has been paid or otherwise satisfied,
 2. A certificate evidencing that insurance required by the Contract Document to remain in force after Final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner,
 3. Consent of surety to Final payment
 4. Other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of claim of liens, claims security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If the Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such claim of lien. If such claim of lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such claim, including all costs and reasonable attorneys' fees.
 5. MWSBE form VI.
 6. A list of all suppliers and subcontractors that were involved with the project. As part of the list, the Contractor shall include the address, phone number, what they supplied or Work performed, and a contact name.
 7. "As-Builts" Drawings and all other specified closeout documents
 8. Maintenance and Operation instructions and guarantees.
- J. Final Payment Application: Submit one original copy of the final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Warranties and Test results required by the Contract Documents.
 2. Updated final statement, accounting for final changes to the Contract Sum.
 3. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
 4. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
 5. AIA Document G707, "Consent of Surety to Final Payment."

6. Additional Evidence that claims have been settled if required by the Owner. An example of the evidence could be a letter from a subcontractor indicating that he has been paid in full for the work that he has performed.
7. Certificates from all local and State Governing Agencies as required by Law.
8. Final liquidated damages settlement statement.
9. List of Subcontractors and Suppliers that has contributed to the completion of the Work. The list shall include:
 - a. Material they supplied or type of construction they performed.
 - b. Address
 - c. Contact person
 - d. Phone number
10. M/WSBE Form VI
11. Final Sales Tax Form.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

SECTION 01 31 19
PROJECT MEETINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for project meetings including but not limited to:
 - 1. Pre-Construction Conference.
 - 2. Progress Meetings.

1.2 PRE-CONSTRUCTION CONFERENCE

- A. The Owner's Representative will schedule a pre-construction conference and organizational meetings at the Project site or other convenient location after execution of the Agreement and prior to commencement of construction activities. The Architect or Engineer will conduct the meeting to review responsibilities and personnel assignments.
- B. Attendees: The Owner, the Owner's Representative, the Engineer and their consultants, the Contractor and his superintendent, major subcontractors, manufacturers, suppliers, and other concerned parties shall each be represented at the conference by persons familiar with and authorized to conclude matters relating to the Work.
- C. Agenda: Discuss items of significance that could affect progress including such topics as:
 - 1. Introduction of Key Personnel
 - a. Distribution and Discussion of:
 - 1) Project Reference List.
 - 2) List of Major Subcontractors and Suppliers.
 - 3) Roles and responsibilities and coordination methods.
 - 2. Schedules
 - a. Notice to Proceed Date/Completion Date.
 - b. Construction Schedule.
 - c. Critical Work Sequencing.
 - d. Submittal Schedule.
 - e. Recovery Plans.

3. Procedures and Processing
 - a. Modifications/Architects Supplemental Instructions.
 - b. Proposal Request.
 - c. Change Orders.
 - d. Field Reports.
 - e. Applications for Payment.
 - f. Submittals.
 - g. Permits.

4. Contract Close-out Procedures
 - a. Record Documents
 - b. Certifications and Warranties
 - c. Substantial and Final Completion

5. Miscellaneous
 - a. Use of Premises.
 - 1) Storage Area(s).
 - 2) Phasing Plan and Fencing Plan.
 - b. Temporary Utilities.
 - c. Safety and First-aid Procedures.
 - d. Security.
 - e. Housekeeping.
 - f. How to coordinate work with school (i.e., Principal, staff, Custodian, Temporary Relocations).
 - g. Hours of Operation.
 - h. Clean-up.

D. The Engineer will record minutes and distribute copies within five (5) days after meeting to all participants.

1.3 PROGRESS MEETINGS

- A. The Engineer will schedule and shall conduct in coordination with the Owner's Representative progress meetings at the Project site as deemed as necessary. The Owner and Engineer will coordinate dates of meetings with preparation of the payment request.

- B. Attendees: In addition to representatives of the Owner, the Program Manager, the Engineer, the Contractor's Project Superintendent and Project Manager, as well as the superintendents and project managers of the plumbing, mechanical, and electrical subcontractors are mandatory along with suppliers or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by persons familiar with the Project and authorized to conclude matters relating to progress.

C. Agenda:

1. Review and correct or approve minutes of the previous progress meeting.
2. Review items of significance that could affect progress. Include topics for discussion as appropriate to the status of the Project.
3. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
4. Submittals: Review overall schedule and anticipated near term needs.
5. Field Observations, Deficiency Lists, Problems, and Conflicts.
6. Change Orders.
7. Off-site fabrication, deliveries, and sequences.
8. Documentation of information for record documents.
9. Safety, hazards, and risks.
Other Business:
 - a. Access.
 - b. Site utilization and security.
 - c. Quality and Work Standards.
 - d. Housekeeping.

D. Reporting: After each progress meeting date, the Engineer shall prepare and distribute copies of minutes of the meeting to each party present and to other parties who should have been present.

E. Schedule Updating: The Contractor shall revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting. No logic or original durations shall be changed without the Engineer and Owner Representative's approval.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all Divisions of the Technical Specifications, apply to this Section.

1.2 SUBMITTAL PROCEDURE

- A. General: The Contractor is responsible for providing submittals to the Engineer. Each submittal must be accepted in writing prior to commencement of work.
- B. Submission Requirements: Submit all required submittals electronically in pdf format. to the Engineer for review. The submittals will then be returned electronically to the Contractor with comments. Final submittals will require written responses to all Construction Document submittal comments.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as specified below. Time for review shall commence on Engineer's receipt of submittal.
 - 1. Initial Review: Allow 7 workdays for initial review of submittals.
 - 2. Allow 7 workdays for processing each resubmittal.
 - 3. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.
- D. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals and provide a letter describing in detail any proposed changes, substitutions, or deviations from the project or manufacturer's specifications. A written explanation of why substitutions should be considered is required and shall be included under the appropriate tab.
- E. Transmittal and Identification: Package submittals appropriately and include a title page and/or pdf bookmark for each numbered schedule of submittal item identified below. Engineer will discard submittals received from sources other than Contractor. Include Contractor's certification stating that information submitted complies with requirements of the Contract Documents.
- F. Use for Construction: Use only final submittals with mark indicating action taken by Engineer in connection with construction.

1.3 SCHEDULE OF SUBMITTALS

The successful Contractor shall prepare and submit two (2) submittal note books and one (1) electronic copy to Wolf Trail Engineering prior to scheduling of the Pre-Construction meeting. Notebooks are to be hard bound ring binders with tabbed dividers separating each section and table of contents. Each submittal notebook shall contain the following:

- A. Emergency Contact List with the name and phone numbers of the contractor's office, project manager, project superintendent, and project foreman. Also list the name, address, and phone numbers of the roofing consultant.
- B. Copy of Contractor's Certificate of Insurance
- C. Copy of the Payment and Performance Bond
- D. Copy of required local permits.
 - 1. The successful contractor shall obtain and deliver to the Owner two (2) copies of all applicable Building/Construction Permits as may be required by local authorities prior to work on site. If permits are not required, a letter on the Contractor's Letterhead shall state that the proper authorities have been contacted and building/construction permits are not required. Include contact information of the responsible authority in the required letter.
- E. Roof Manufacturer's Acknowledgement stating they have reviewed these specifications and drawings, and this roofing system will be eligible for a 20-year NDL warrantee at the end of the project. This document is required before the Contract or Notice to Proceed is issued.
- F. Copy of all Warranties to meet the requirements of their respective specification section.
- G. Letter describing in detail any proposed changes, substitutions, or deviations from the project or manufacturer's specifications. A written explanation of why substitutions should be considered is required.
- H. Work schedule indicating start date, crew size, completion date, etc.
 - 1. See Section 00 31 13 Preliminary Schedule
- I. Sample Application for Payment including Schedule of Values. Immediately after execution and delivery of the Contract, and before the first partial payment is submitted, the Contractor shall submit to the Owner through the Engineer the following:
 - 1. An Application for Payment on AIA G702.
 - 2. A schedule of values on AIA G703 Continuation Sheet consisting of a detailed breakdown of the Contract amount showing separate figures for labor and

materials. The work listed under the various sections and subsections of the Specifications shall serve as the format for preparation of the following.

- J. The enclosed material lists, and drawings shall serve as a preapproved submittal package for the successful bidder. The material lists herein shall be copied and the proposed materials marked to show the system and materials included in the contractor's bid. Where ASTM specifications are given the Contractor shall furnish the name of the material to be used. MSDS sheets are required for all materials used and are to be attached to the submittals.
- K. The detail drawings shall be copied from this manual and initialed by the Contractor and shall serve as the shop drawings for the project. See section on substitution of materials for additional instructions.
- L. The Contractor shall submit manufacturer's literature on insulation or base sheet and fasteners to be used on the project. The submittal information shall include the type and number of fasteners for the type of base sheet or type and size of insulation board material to be installed, and the quantity of fasteners to be used at perimeters, corners, and the field of the roof wherever mechanical securement of roof system is required by the specifications.
- M. The Contractor shall submit in writing on the form provided, that all materials to be used on the project do not contain asbestos.
- N. Complete list of materials with Material Safety Data Sheets (MSDS)
- O. Tapered Insulation Design & Layout. Tapered insulation design must show crickets/saddles. Roof curbs and penetrations must be considered when designing tapered roof insulation system.
- P. Manufacturer's Contractor Certification Certificate, manufacturer's literature, and materials list for proposed roof assembly.
- Q. The contractor shall submit a signed copy of the Jessica Lunsford Act. (See Forms)
- R. The contractor must submit the employee training information listed below for all personnel who disturb asbestos containing materials.
 - 1. Name of employee
 - 2. Last date of training
 - 3. Type of training
 - 4. Copies of personnel accreditation/license.
 - 5. The contractor must submit CERTA training information for all personnel who will be using a torch.
 - 6. Nailing/screwing pattern layout for the insulation from the manufacturer.

- S. Existing damaged/dysfunctional components documentation (videotape, photos, etc.) including but not limited to, asphalt spills, windows, walls, sidewalks, paving, ceilings, etc. Lack of submission prior to commencement of work indicates Contractor has discovered no existing damaged components and takes responsibility for any damages caused by operations.

PART 2 - PRODUCTS

2.1 SUBMITTALS

- A. General: Prepare and submit Submittals required herein and by individual Specification Sections.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for submittal because standard printed data is not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Compliance with recognized trade association standards.
 - e. Compliance with recognized testing agency standards.
- C. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.
- D. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.
- E. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.
- F. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements.
- G. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.

- H. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- I. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, uplift diagram, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- J. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.
- K. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal, check for compliance with the Contract Documents and note corrections and field dimensions prior to submitting to Engineer.

3.2 ENGINEER'S ACTION

- A. Submittals: Engineer will review each submittal, make marks to indicate corrections or modifications required, and return it. The Engineer will stamp each submittal item with an action stamp and will mark the stamp appropriately to indicate action taken.
- B. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

END OF SECTION 01 33 00

SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all Divisions of the Technical Specifications, apply to this Section.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.

1.4 SUBMITTALS

- A. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.5 QUALITY ASSURANCE

- A. Quality Assurance will be performed in accordance with governing Codes, referenced or established standards, or industry standards.
- B. Control of Installation
 1. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
 2. Comply with manufacturers' instructions, including each step-in sequence.
 3. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.
 4. Comply with specified standards as the minimum quality for the Work, except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

5. Only allow Work to be performed by person qualified to produce workmanship of specified quality.
 6. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
- C. Tolerances
1. Monitor tolerance control of installed products to produce acceptable work. Do not permit tolerance to accumulate.
 2. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
 3. Adjust products to appropriate dimensions; position before securing products in place.
- D. It is the intent under this contract that workmanship shall be of the best quality consistent with the materials and construction methods specified. The presence or absence of the Owner's or Engineer's representative shall in no way relieve the Contractor of his responsibility to furnish materials and construction in full compliance with the drawings and specifications. The Owner and Engineer shall have the authority to judge the quality and require replacement of unacceptable work or personnel at any time.
- E. All contractors shall cooperate in the execution of their work and shall plan their work in such manners as to avoid conflicting schedules or delays of work. If any part of a Contractor's work depends upon the work of another Contractor, defects, which may affect that work, shall be reported to the Engineer in order that prompt inspection may be made, and defects corrected. Commencement of work by a Contractor where such a condition exists will constitute acceptance of the other Contractor's work as being satisfactory in all respects to receive the work commenced, except defects, which may later develop. The work of all trades under this contract shall be closely coordinated in such a manner as to obtain the best possible workmanship for the entire project. All components of the work shall be installed in accordance with the best practices of the particular trade. The General Contractor is responsible for advising the Owner sufficiently in advance of operations to allow for assignment of personnel.
- F. Materials or methods described by words which, when applied, have a well-known technical or trade meaning will be held to refer to such recognized standard. Standard specifications or manufacturer's literature, when referenced, shall be of the latest revision or printing unless otherwise stated, and are intended to establish the minimum requirements acceptable.
- G. All materials shall be new, all materials and workmanship shall be in every respect in accordance with the best modern practice.
- H. When special makes or grades of material which are normally packaged by the supplier or manufacturer are specified or accepted, such materials shall be delivered to the site in original packages or containers with seals unbroken and labels intact and shall not be

opened until inspected and approved by the Engineer. The contractor shall notify the Engineer prior to such material's delivery.

- I. The Contractor's Foreman or Superintendent to maintain one complete set of the contract documents and approved submittals on the job site.
- J. Contractor shall be responsible to correct deficiencies identified by Engineer and non-conforming work within 24 hours of receipt of notification, either verbally or written, and submit a plan of action for addressing the deficiencies and non-conforming work. Further tear-off or commencement of other work shall not occur until all deficiencies and non-conforming work are properly addressed.
- K. At any time during the construction and completion of work covered by these Specifications, if the conduct of any workman of the various crafts be determined unsuitable or a nuisance to the Owner or Engineer, or if the workman be considered incompetent or detrimental to the work, the Contractor shall order such party removed immediately from the grounds with the person not returning at any time during the course of work on the project.
- L. During the performance of any work by the Contractor or subcontractors, the Contractor shall provide for the entire length of the project a full-time onsite superintendent/representative meeting the following requirements:
 - 1. For the purpose of these Specifications the designation "superintendent" is hereby defined as the individual present on the job site at all times while work is being performed, and whose primary responsibility is to supervise and direct the performance of the Work.
 - 2. The superintendent shall attend the project site at all times during the progress of the work and his duties as superintendent shall be limited to this project only. The superintendent shall supervise and instruct workmen without engaging in the work process. Should the superintendent be absent temporarily from the project at any time, he shall designate a competent foreman to assume duties. During the superintendent's absence the foreman shall not engage in the work process but shall supervise and instruct only. Likewise, any communications given to the foreman shall be as binding as if given to the Contractor.
 - 3. It shall be the superintendent's responsibility to communicate all matters pertaining to the Work with the Owner and/or Engineer. In case of emergency or safety, the superintendent shall communicate directly with the Owner and/or Engineer. No decisions regarding changes in the Work will be made without the Owner's knowledge.
 - 4. Decision making authority and ability.
 - 5. Able to demonstrate knowledge of work being installed.
 - 6. Fluent in the English language (i.e., reading, writing and speaking).
 - 7. In possession of a mobile telephone at all times.

M. Specialists: Certain sections of the Specifications require that specific construction activities be performed by entities who are recognized experts in those operations. Specialists shall satisfy the qualification requirements indicated and shall be engaged for the activities indicated.

1.6 QUALITY CONTROL

A. The authorized representatives and agents of the Owner shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records.

B. Contractor's Responsibilities:

1. Repair and protection of work and materials are Contractor's responsibility.
2. Should any work or materials not conform with requirements of the Specifications or become damaged during the progress of the work, such work or materials shall be removed and replaced, together with any work disarranged by such alterations, at any time before completion and acceptance of the project. All such work shall be done at the expense of the Contractor.
3. Contractor will coordinate documents with manufacturer and perform such testing, reporting, and communication incidental to provisions of the warranty procedures.
4. Inclement Weather
 - a. In the event of temporary suspension of work as during inclement weather, or whenever the Engineer shall direct, the Contractor will carefully protect its work and materials against damage or injury from weather. If, in the opinion of the Engineer, any work or materials have been damaged or injured by reason of failure of the Contractor to protect its work, such materials shall be removed and replaced at the expense of the Contractor.
 - b. During inclement weather and temporary suspension of work, the Contractor shall inspect the facility each day for leaks and perform temporary repairs if necessary. Inspections shall be made daily during extended periods of inclement weather. Upon arrival at the facility, Superintendent shall immediately inform the Owner of his presence and purpose.
 - c. Should inclement weather occur after normal business hours Friday, Saturday, and Sunday or holidays, Contractor shall make arrangements with the Owner to provide access to the building to inspect for leaks.

C. Manufacturer's Field Services: During construction and until substantial completion, manufacturer's representative shall perform quality assurance site visits monthly to ensure materials are being properly installed and as required to obtain the specified warranty.

1. The first site visit shall be performed within the first three (3) days of operations.

2. Coordinate all site visits with Engineer. Submit reports of findings within one week of inspection. Payment applications will be rejected until applicable reports are received.
3. Inspections to be performed by an employee of the selected manufacturer that is assigned full time to their technical services department. Sales personnel will not be acceptable for this function and may result in rejection of the work installed that does not fulfill this requirement.
4. The manufacturer's final inspections shall be performed only with Wolftrail Engineering personnel in attendance. A minimum of seven days' written notice is required. Any manufacturer's final inspection conducted without Wolftrail Engineering personnel in attendance will be repeated at no additional cost to the Owner.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
- B. Comply with the Contract Document requirements for Section 01 73 29-Cutting and Patching.
- C. Protect construction exposed by or for quality-control service activities.
- D. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality- control services.

END OF SECTION 01 40 00

SECTION 01 42 00
REFERENCES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Requirements relating to Referenced Standards.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all Divisions of the Technical Specifications, apply to this Section.

1.3 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Engineer's action on Contractor's submittals, applications, and requests, "approved" is limited to Engineer's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Engineer. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations
- H. "Provide": Furnish and install, complete and ready for the intended use

- I. "Installer": Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub- subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades people of the corresponding generic name.
- J. "Experienced": When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- K. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.4 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated
- C. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Engineer for a decision before proceeding
 - 1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Engineer for a decision before proceeding
- D. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up to date as of the date of the Contract Documents

1. Accessibility Guidelines for Buildings and Facilities. Available from Access Board www.access-board.gov
2. CFR - Code of Federal Regulations. Available from Government Printing Office www.access.gpo.gov/nara/cfr
3. FED-STD - Federal Standard (See FS)
4. FS - Federal Specification. Available from National Institute of Building Sciences www.nibs.org

1.5 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up to date as of the date of the Contract Documents.

1. AA - Aluminum Association, Inc. (The) www.aluminum.org
2. ACI - American Concrete Institute/ACI International www.aci-int.org
3. ACPA - American Concrete Pipe Association www.concrete-pipe.org
4. AGC - Associated General Contractors of America (The) www.agc.org
5. AHA - American Hardboard Association www.ahardbd.org
6. AI - Asphalt Institute www.asphaltinstitute.org
7. AIA - American Institute of Architects (The) www.aia.org
8. AIE - American Institute of Engineers www.aieonline.org
9. AISC - American Institute of Steel Construction www.aisc.org
10. AISI - American Iron and Steel Institute www.steel.org
11. ALCA - Associated Landscape Contractors of America www.alca.org
12. ALSC - American Lumber Standard Committee www.alsc.org
13. ANLA - American Nursery & Landscape Association www.anla.org
14. ANSI - American National Standards Institute www.ansi.org
15. APA - The Engineered Wood Association www.apawood.org
16. APA - Architectural Precast Association www.archprecast.org

17. ASCE - American Society of Civil Engineers www.asce.org
18. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers
www.ashrae.org
19. ASME - ASME International (The American Society of Mechanical Engineers International) www.asme.org
20. ASTM - American Society for Testing and Materials www.astm.org
21. AWI - Architectural Woodwork Institute www.awinet.org
22. AWPA - American Wood-Preservers' Association www.awpa.com
23. AWS - American Welding Society www.aws.org
24. BHMA – Builders Hardware Manufacturers Association www.buildershardware.com
25. BIA - Brick Industry Association (The) www.bia.org
26. CCFSS - Center for Cold-Formed Steel Structures www.umr.edu/~ccfss
27. CDA - Copper Development Association Inc. www.copper.org
28. CIMA - Cellulose Insulation Manufacturers Association www.cellulose.org
29. CISCA - Ceilings & Interior Systems Construction Association www.cisca.org
30. CISPA - Cast Iron Soil Pipe Institute www.cispi.org
31. CLFMI - Chain Link Fence Manufacturers Institute www.chainlinkinfo.org
32. CPA - Composite Panel Association (Formerly: National Particleboard Association)
www.pbmdf.com
33. CPPA - Corrugated Polyethylene Pipe Association www.cppa-info.org
34. CRSI - Concrete Reinforcing Steel Institute www.crsi.org
35. CSI - Construction Specifications Institute (The) www.csinet.org
36. DHI - Door and Hardware Institute www.dhi.org
37. EIMA - EIFS Industry Members Association www.eifsfacts.com
38. EJMA - Expansion Joint Manufacturers Association, Inc. www.ejma.org
39. FMG (FM) - FM Global (Formerly: FM - Factory Mutual System) www.fmglobal.com
40. GA - Gypsum Association www.gypsum.org

41. GANA - Glass Association of North America (Formerly: FGMA - Flat Glass Marketing Association) www.glasswebsite.com/gana
42. HPVA - Hardwood Plywood & Veneer Association www.hpva.org
43. IGCC - Insulating Glass Certification Council www.igcc.org
44. LGSJ - Light Gage Structural Institute www.loseke.com
45. MBMA - Metal Building Manufacturers Association www.mbma.com
46. MCA - Metal Construction Association www.metalconstruction.org
47. MFMA - Metal Framing Manufacturers Association www.metalframingmfg.org
48. MIA - Marble Institute of America www.marble-institute.com
49. NAAMM - National Association of Architectural Metal Manufacturers www.naamm.org
50. NAIMA - North American Insulation Manufacturers Association (The) www.naima.org
51. NCMA - National Concrete Masonry Association www.ncma.org
52. NCPI - National Clay Pipe Institute www.ncpi.org
53. NECA - National Electrical Contractors Association www.necanet.org
54. NEMA - National Electrical Manufacturers Association www.nema.org
55. NETA - International Electrical Testing Association www.netaworld.org
56. NFPA - National Fire Protection Association www.nfpa.org
57. NFRC - National Fenestration Rating Council www.nfrc.org
58. NGA - National Glass Association www.glass.org
59. NHLA - National Hardwood Lumber Association www.natlhardwood.org
60. NLGA - National Lumber Grades Authority www.nlga.org
61. NPA - National Particleboard Association (See CPA)
62. NRCA - National Roofing Contractors Association www.nrca.net
63. NRMCA - National Ready Mixed Concrete Association www.nrmca.org
64. NSA - National Stone Association www.aggregates.org
65. NTMA - National Terrazzo and Mosaic Association, Inc. www.ntma.com

66. NWWDA - National Wood Window and Door Association (See WDMA)
67. PCI - Precast/Prestressed Concrete Institute www.pci.org
68. PDCA - Painting and Decorating Contractors of America www.pdca.com
69. PDI - Plumbing & Drainage Institute www.pdionline.org
70. RCSC - Research Council on Structural Connections www.boltcouncil.org
71. RMA - Rubber Manufacturers Association www.rma.org
72. SDI - Steel Deck Institute www.sdi.org
73. SDI - Steel Door Institute www.steeldoor.org
74. SGCC - Safety Glazing Certification Council www.sgcc.org
75. SIGMA - Sealed Insulating Glass Manufacturers Association www.sigmaonline.org/sigma
76. SJI - Steel Joist Institute www.steeljoist.org
77. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association
www.smacna.org
78. SPFA - Spray Polyurethane Foam Alliance(Formerly: SPI/SPFD - The Society of the
Plastics Industry, Inc.; Spray Polyurethane Foam Division) www.sprayfoam.org
79. SPI - The Society of the Plastics Industry www.plasticsindustry.org
80. SPIB - Southern Pine Inspection Bureau (The) www.spib.org
81. SPRI - SPRI (Single Ply Roofing Institute) www.spri.org
82. SSINA - Specialty Steel Industry of North America www.ssina.com
83. SSMA - Steel Stud Manufacturers Association (Formerly: ML/SFA - Metal Lath/Steel
Framing Association) www.ssma.com
84. SSPC - The Society for Protective Coatings www.sspc.org
85. SWI - Steel Window Institute www.steelwindows.com
86. TCA - Tile Council of America, Inc. www.tileusa.com
87. TPI - Truss Plate Institute
88. UL - Underwriters Laboratories Inc. www.ul.com

89. WDMA - Window & Door Manufacturers Association (Formerly: NWWDA - National Wood Window and Door Association) www.wdma.com

90. WMMPA - Wood Moulding & Millwork Producers Association www.wmmpa.com

91. WWPA - Western Wood Products Association www.wwpa.org

B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up to date as of the date of the Contract Documents.

1. BOCA - BOCA International, Inc. www.bocai.org

2. IAPMO - International Association of Plumbing and Mechanical Officials (The) www.iapmo.org

3. ICBO - International Conference of Building Officials www.icbo.org

4. ICC - International Code Council (Formerly: CABO - Council of American Building Officials) www.intlcode.org

5. SBCCI - Southern Building Code Congress International, Inc. www.sbcci.org

C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up to date as of the date of the Contract Documents.

1. CPSC - Consumer Product Safety Commission www.cpsc.gov

2. EPA - Environmental Protection Agency www.epa.gov

3. OSHA - Occupational Safety & Health Administration www.osha.gov

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 42 00

SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and all Divisions of the Technical Specifications, apply to this Section.

1.3 QUALITY ASSURANCE

- A. Standards: Comply with ANSI A10.6, NECA's "Temporary Electrical Facilities," and NFPA 241.
 - 1. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.4 SCHEDULE OF SUBMITTALS

- A. Conditions of Use: The following conditions apply to the use of temporary services and facilities by all parties engaged in the work.
 - 1. Keep temporary services and facilities clean and neat.
 - 2. Relocate temporary services and facilities as required by progress of the Work.
- B. Parking and Traffic Control: Contractor shall be responsible for obtaining and erecting street/parking lot signage as necessary to divert traffic away from staging areas, etc. Contractor is to coordinate signage requirements with the Owner and Engineer. All associated costs are to be borne by the Contractor. Contractor shall provide area for parking for subcontractors, Engineer, and Owner representatives.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by the Engineer. Provide materials suitable for use intended.
- B. Portable Chain-Link Fencing: Minimum 2-inch 9-gage, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top and bottom rails. Provide non-permanent bases for support.
- C. Water: Potable.
- D. Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation, or combustion type; vented; fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- E. Electrical Outlets: Provide properly configured NEMA polarized outlets that prevent insertion of 110-120 volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset buttons and pilot lights for connection of power tools and equipment within 100 feet of all work areas. All temporary electrical systems should be inspected and tested on a regular basis. Contractor shall document these inspections.
- F. Electrical Power Cords: All Contractors shall provide UL tested and labeled, grounded "hard service" cords of an appropriate gauge for the intended application. Provide waterproof connectors as needed to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. All electrical cords shall be inspected on a regular basis (Quarterly at a Minimum) and identification of inspection must be visible, i.e. mark with colored tape or tag
- G. Scaffolds: Scaffolds should be built in their entirety and not left unfinished or in an unsafe condition. All scaffolds must be tagged to indicate the latest inspection. Scaffolds should be tied into the structure as close to a 3:1 ratio as possible and repeated tie-ins shall follow OSHA guidelines. All scaffolds shall have safe access with stairs being the first choice over a ladder. Scaffolds should include netting on upper levels if there is any possibility for materials to fall over the toe boards, per OSHA guidelines.
- H. Fire Extinguishers: Provide hand-carried, portable UL-rated, class "ABC" fire extinguishers for temporary offices and similar spaces. In other locations provide hand-carried,

portable, UL-rated, class “ABC” dry chemical extinguishers or a combination of extinguishers of NFPA recommended classes suited for the exposures.

1. Comply with NFPA 10 and 241 for classification of extinguishing agent and size required by location and class of fire exposure.
2. Provide an appropriate number of designated fire watch individuals with fully charged fire extinguishers, welding blankets and welding screens as required to limit risks associated with welding, cutting, and burning or any other activity which has the potential to cause a fire. All Hot work shall be done under a permit system.

PART 3 - EXECUTION

3.1 GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work.

3.2 PROJECT SITE LOGISTICS

- A. The Contractor shall develop a detailed site logistics plan for review and coordination with the Owner. The logistics plan shall be discussed with all site personnel and updated monthly by the Contractor. The logistics plan should include the following information:
 1. Staging areas
 2. Material storage area
 3. Dumpster location(s)
 4. Temporary toilet locations
 5. Delineation of site fencing
 6. Other pertinent information
- B. The Contractor shall separate pedestrian and vehicular traffic from their staging and material storage area, using barriers, cones, or similar materials and provide signage delineating routes.
- C. The Contractor is responsible for always keeping the project site in a clean and orderly fashion.
- D. The Contractor shall provide signs throughout the site where necessary to provide clear instruction (i.e., “No Smoking”, “No Entry”, “Emergency Exit”, etc.) All signage shall be provided in English and Spanish.

3.3 LIFTING EQUIPMENT

- A. Where cranes and other lifting equipment are required, the Contractor shall develop and maintain a plan to execute the work in a safe manner. The plan should include the following items at a minimum:
 - 1. Erection, climbing and dismantling process
 - 2. Inspection process for all equipment and rigging
 - 3. Exclusion zones
 - 4. Maintenance processes
 - 5. Identification of Qualified/Competent persons
 - 6. Lifting plan
 - 7. Process for identifying and working around aerial hazards
 - 8. Signalmen communication
 - 9. Working around energized lines
 - 10. Ground conditions and underground hazard
- B. The Contractor is responsible for ensuring that all cranes and lifting equipment are certified for use by a Qualified/Competent person prior to first use and annually (at a minimum).
- C. The Contractor is responsible for ensuring that all cranes and lifting equipment are inspected as required by a third party Qualified/Competent person.

3.4 TEMPORARY UTILITY INSTALLATION

- A. **Water Service:** Water for construction purposes will be available from the Owner at no charge. The contractor shall operate exterior hose bids only with properly fitted handles which shall be removed at the end of each workday. Any damage to hose bids or hose bib stems shall be repaired by the Contractor. Hose bibs shall not be operated with pliers.
- B. **Sanitary Facilities:** Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities. Facilities will be located at sites approved by Owner.
 - 1. **Disposable Supplies:** Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Maintain adequate supply. Provide covered waste containers for disposal of used material.
 - 2. **Toilets:** Install self-contained toilet units. Shield toilets to ensure privacy.
 - 3. **Drinking-Water Facilities:** Provide bottled-water, drinking-water units.
- C. **Electrical Power Service:** Contractor shall provide portable generators for all electrical power requirements.

- D. Electric Distribution: Provide receptacle outlets adequate for connection of power tools and equipment.
 - 1. Provide waterproof connectors to connect separate lengths of electrical power cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.

3.5 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 - 1. Locate field offices, storage sheds, sanitary facilities, and other temporary construction and support facilities for easy access. Coordinate with Engineer on location.
 - 2. Provide incombustible construction for offices, shops, and sheds located within construction area or within 30 feet of building lines. Comply with NFPA 241.
 - 3. Maintain support facilities until near Final Acceptance. Remove before Final Acceptance. Personnel remaining after Final Acceptance will be permitted to use permanent facilities, under conditions acceptable to the Owner.
- B. Traffic Controls: Provide temporary traffic controls at junction of temporary roads with public roads. Include warning signs for public traffic and "STOP" signs for entrance onto public roads. Comply with requirements of authorities having jurisdiction.
- C. Project Identification and Temporary Signs: Prepare Project identification and other signs in sizes indicated. Install signs where indicated to inform public and persons seeking entrance to Project. Do not permit installation of unauthorized signs.
 - 1. Prepare temporary signs to provide directional information to construction personnel and visitors.
- D. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste. Comply with Section 01 74 00 Cleaning and Waste Management for progress cleaning requirements.
 - 1. If required by authorities having jurisdiction, provide separate containers, clearly labeled, for each type of waste material to be deposited.
- E. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment involved, including temporary utility services. Sheds may be open shelters or fully enclosed spaces within building or elsewhere on-site.

3.6 SECURITY AND INSPECTION FACILITIES

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other

undesirable effects. Avoid using tools and equipment that produce harmful noise. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms near Project site.

- B. Material Storage Enclosure Fence: Install enclosure fence with lockable gates to completely enclose and hide the materials storage, or store as much material in locked trailers as practicable.
- C. Provide, erect, and always maintain six (6) foot chain link fence with lockable gates around the asphalt kettle.
- D. Security Enclosure and Lockup: Install substantial temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
- E. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of possible hazard. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- F. Develop and supervise an overall fire-prevention and first-aid fire-protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
- G. Protection of adjacent roof areas: Contractor shall provide protection to adjacent roof systems in the form of
- H. $\frac{3}{4}$ " CDX plywood over 1.5" rigid insulation with warning flags on both sides. All foot and equipment traffic shall be limited to protected walkways.

3.7 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage caused by freezing temperatures and similar elements.
- C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Final Acceptance.

END OF SECTION 01 50 00

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements governing the Contractor's selection of products, materials, and equipment for use in the Project.
- B. The Contractor's construction schedule and the Schedule of Submittals are included in Section 01 33 00 - Submittal Procedures.
- C. Administrative procedures for handling requests for substitution made after award of the Contract are included in Section 01 25 00 - Substitution Procedures

1.2 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties", "systems", "structure", "finishes" "accessories" and similar terms. Such terms are self-explanatory and have well recognized meanings in the construction industry.
 - 1. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product": includes the terms "material", "equipment", "system" and terms of similar intent.
 - 2. "Named Products" are items identified by manufacturer's product name, including the make or model designation, as indicated in the manufacturer's published product literature, current as of the date of the Contract Documents.
 - 3. "Materials" are products that are substantially shaped, cut, worked, mixed, finished, refined, or otherwise fabricated, processed, or installed to form a part of the Work.
 - 4. "Equipment" is a product with operational parts; whether motorized or manually operated that requires service connections such as wiring or piping.

1.3 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.
- B. Compatibility of Options: When the Contractor is given the option of selecting between two (2) or more products for use on the Project; the product selected shall be compatible

with products previously selected even if the previously selected products were also options.

1. If a dispute arises between Contractors over concurrently selectable, but incompatible products, the Engineer will determine which products shall be retained and which are incompatible and must be replaced.

C. Owner's Right of Final Approval: The Owner reserves the right of Final Approval of all labor, material, and equipment.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store and handle products in accordance with the manufacturer's recommendations using means and methods that will prevent damage, deterioration, and loss, including theft.

1. Transport and handle products in accordance with manufacturer's instructions.
2. Promptly inspect shipments to ensure that products comply with requirements, that quantities are correct, and products are undamaged.
3. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.
4. Store and protect products in accordance with manufacturers' instructions, with seals and labels intact and legible.
5. Store sensitive products in weather tight, climate-controlled enclosures.
6. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.
7. For exterior storage of fabricated products, place on sloped supports, above ground.
8. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
9. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation or potential degradation of product.
10. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
11. Always maintain storage in a neat and clean condition.

12. The Owner's Representative will not receive Contractor Materials, nor sign shipping bills. On-site storage shall be in areas designated by the Contractor, with the approval of the Owner.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents that are undamaged and, unless otherwise indicated, unused at the time of installation.
 1. Provide products complete with all accessories, trims, finishes, safety guards and other devices and details needed for a complete installation and for the intended use and effect.
 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other Projects.
 3. Reference in the project manual or on the drawings to an article device, product, material, fixture, form, or type of construction by name, make or catalog number (product or method) whether or not followed by "or equal" establishes a standard of quality, and does not eliminate from competition other products or methods of equal or better quality by other manufacturers, where fully suitable, as approved by the Engineer. Applications for approval of substitutions for the specified products or methods will be considered only upon request of the Contractor, not of Subcontractors individual trades or suppliers, and only for a specific purpose; no blanket approvals will be granted. No approval of a substitution will be valid unless it is in written form and submitted in accordance with 01 25 00 Substitution Procedures.
- B. Product Selection Procedures: Product selection is governed by the Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include the following:
 1. Semi-proprietary Specification Requirements: Where two (2) or more products or manufacturers are named, provide one of the products indicated. No substitutions will be permitted. Where products or manufacturers are specified by name, accompanied by the term "or equal", or "or approved equal", comply with the Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
 2. Non-Proprietary Specifications: When the Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not

restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with Contract requirements. Comply with Contract Document provisions concerning “substitutions” to obtain approval for use of an unnamed product.

3. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with the Contract requirements.
4. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated. Overall performance of a product is implied where the product is specified for a specific application. Manufacturer’s recommendations may be contained in published product literature or by the manufacturer’s certification of performance.
5. Compliance with Standards, Codes and Regulations: Where the Specifications only requires compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes or regulations specified.
6. Visual Matching: Where Specifications require matching an established Sample, the Engineer’s decision will be final on whether a proposed product matches satisfactorily. Where no product available within the specified category matches satisfactorily and complies with other specified requirements, comply with the provisions of the Contract Documents concerning “substitutions” for selection of a matching product in another product category or seek the Engineers recommendation in writing.
7. Visual Selection: Where specified product requirements include the phrase “...as selected from manufacturer’s standard colors, patterns, textures...” or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Engineer will select the color, pattern, and texture from the product line selected.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer’s instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other work. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION 01 60 00

SECTION 01 73 29
CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and supervisory requirements for cutting and patching.
- B. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
- C. The Contractor shall do all cutting, fitting, or patching of his work that may be required to ensure various parts fit together properly and are prepared to receive or be received by Work of others as indicated or reasonably implied by the drawings and specifications for the completed structure. The Contractor will make corrections as the Engineer may direct.
- D. Any cost brought about by defective or ill-timed work shall be borne by the Contractor.
- E. The Contractor shall not endanger any existing or newly completed work by cutting, digging or other activity and shall not cut or alter the Work of any other Prime Contractor except with the consent of the Engineer.
- F. Cutting and patching should be performed by workers skilled in the trade and sequenced to avoid delays.
- G. The Contractor shall not perform cutting or patching operations that impact the structural, functional, or aesthetic qualities of the Work.

1.2 SUBMITTALS

- A. Cutting and Patching Plan: Where approval of procedures for cutting and patching is required before proceeding, the Contractor shall submit a plan describing procedures well in advance of the time the cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the plan:
 - 1. Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.
 - 2. Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
 - 3. List products to be used and firms or entities that will perform Work.
 - 4. Indicate dates when cutting and patching is to be performed.

5. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
6. Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure.
7. Approval by the Engineer to proceed with cutting and patching does not waive the Engineer's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory.

1.3 QUALITY ASSURANCE

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.
 1. Obtain written approval of the Engineer and Structural Engineer for the cutting and patching proposed before cutting and patching the following structural elements:
 - a. Foundation construction.
 - b. Bearing and retaining walls.
 - c. Structural concrete.
 - d. Structural steel.
 - e. Lintels.
 - f. Timber and primary wood framing.
 - g. Structural decking.
 - h. Stair systems.
 - i. Miscellaneous structural metals.
 - j. Exterior curtain wall construction.
 - k. Equipment supports.
 - l. Piping, ductwork, vessels, and equipment.
- B. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.
- C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Engineer's professional judgment, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Retain the original installer or fabricator, if possible, to cut and patch any Work that remains exposed. Remove and replace any Work that is cut and patched in a visually unsatisfactory manner.
- D. Coordination: The Contractor is responsible for coordinating the Work to minimize the amount of cutting and patching.
 - 1.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Use materials that are identical to existing materials and that fully match existing adjacent surfaces as much as possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Before cutting existing surfaces examine surfaces to be cut and patched and conditions under which cutting, and patching is to be performed. Make corrections before proceeding, if unsafe or unsatisfactory conditions are encountered.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect existing construction or finishes during cutting and patching operations to prevent damage. Provide protection from adverse weather conditions for any portions of the Project that might be exposed during cutting and patching operations.

3.3 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
- B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction to provide for installation of other components or performance of other construction activities and provide the subsequent fitting and patching required to restore surfaces to their original condition. Where possible, review proposed procedures with the original installer; comply with the original installer's recommendations.
 - 1. In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering, and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed areas.
 3. Cut through concrete and masonry using appropriate cutting equipment such as a carborundum saw or diamond core drill.
 4. Comply with requirements of applicable Specification Sections where cutting and patching requires excavating and backfilling.
 5. By-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or partitions to be removed. Conspicuously label any abandoned sections of pipe or conduit and, if required, support remaining sections. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
1. Inspect and test patched areas to demonstrate integrity of the installation.
 2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 3. Where removal of walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space to provide an even plane surface of uniform appearance and color. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken area containing the patch, after the patched area has received primer and second coat.
 4. Patch, repair, or re-hang existing ceilings as necessary to provide an even plane surface of uniform appearance.
- D. Cutting and patching shall be the responsibility of the trade whose work requires the cutting and patching unless specifically detailed and assigned in the Contract Documents. All patching shall be performed by qualified mechanics experienced in the specialty involved, to the standards of the project specifications. The Contractor shall coordinate all cutting and patching with the Owner's representative prior to commencement of the work.
- E. Renovation Project Procedures
1. Materials: As specified in technical sections, match existing products and Work.
 2. Employ skilled and experienced installer to perform cutting and patching.
 3. Remove, cut, and patch materials in a manner to minimize damage and to provide a means of restoring products and finishes to original condition.
 4. Refinish existing visible surfaces to remain in renovated rooms and spaces, to renewed condition for each material, with a neat transition to adjacent finishes.

5. Where new work abuts or aligns with existing, provide a smooth and even transition. Patch work to match existing adjacent work in texture and appearance.
 6. When a smooth transition with new Work is not possible, submit recommendation to Engineer for review. Terminate existing surface along a straight line at a natural line of division when possible.
 7. Patch or replace portions of existing surfaces, which are damaged, lifted, discolored, or showing other imperfections.
 8. Finish surfaces as specified in individual Product sessions.
 9. Cutting and patching shall be done in a manner such that the patched surfaces are compatible with the surfaces in which the repairs were made, both structurally and aesthetically as deemed appropriate by the Project Engineer.
- F. Restoration: Restore existing work, including concealed work not indicated or specified to be modified, and which is damaged or otherwise affected by The Contractor's operations, to a condition equal to that, which existed before the work was commenced. Use workers skilled in reconstruction and alteration work where new construction adjoins, connects to, or abuts existing work. Join new Work to existing Work in such a manner as to make the joining as inconspicuous as possible. Obvious patching of damaged Work will not be acceptable. At the completion, ensure that the buildings and grounds are in first-class condition within the intent of these specifications, with new parts well joined to the old as required, all connections completed, and facilities in full working condition.

3.4 CLEANING

- A. Thoroughly clean areas and spaces where cutting and patching performed where required for construction or used as access. Leave work in an acceptable completed condition.

END OF SECTION 01 73 29

SECTION 01 74 13
PROGRESS AND FINAL CLEANING

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for progress cleaning and final cleaning.

1.2 ACTION SUBMITTALS

A. Product Data:

- 1. Cleaning Products: Indicate compliance with quality assurance requirements.
- 2. Disinfectants, Metal Polish, Floor Finishes, and Strippers: Indicate compliance with quality assurance requirements.

- B. Equipment Data: Indicate equipment used for final cleaning complies with quality assurance requirements.

- C. Product Application Schedule: Schedule of cleaning products indicating application for each type of product.

- D. Final Cleaning Program: Description of cleaning procedures and product applications for final cleaning for each type of room, surface and material.

1.3 QUALITY ASSURANCE

- A. Worker Qualifications: Provide cleaning services performed by experienced firm specializing in cleaning of new construction of similar type and scope, employing workers trained by suppliers of products and equipment utilized in progress and final cleaning.

- B. Equipment Certification: Perform final cleaning utilizing vacuum equipment certified under Carpet and Rug Institute Green Label program, equipped with HEPA filters.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Materials, General: Do not introduce cleaning agents, disinfectants, metal polishes, floor strippers, or other products into the facility that are not listed on the approved product application schedule.

- B. Cleaning Agents: Use cleaning materials and agents recommended by the manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Unless otherwise indicated, use cleaning products that meet Green Seal GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 – EXECUTION

3.1 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 2. Do not hold waste materials for more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Utilize containers intended for holding waste materials of type to be stored.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 1. Remove liquid spills promptly.
 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
 3. Sweep the parking lot and drive with a magnet daily.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Division 01 Section "Construction Waste Management and Disposal."
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure

protection from damage or deterioration at Substantial Completion.

- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

3.2 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations. Leave Project clean and ready for occupancy.
- B. Cleaning: Clean each surface or unit to the quality level specified. Comply with product manufacturers and equipment manufacturers' written instructions.
- C. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

1. Project Site

- a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
- b. Sweep paved areas broom clean, wash walkways clean. Remove petrochemical spills, stains, and other foreign deposits.
- c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
- d. Remove tools, construction equipment, machinery, and surplus material from Project site.

2. Building Exterior and Interior

- a. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
- b. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
- c. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
- d. Remove labels and protective films that are not permanent.
- e. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
- f. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint from surface to provide intended readability.

- g. Clean both sides of the first floor, and the interior of second floor and higher, windows and vision lights.
- h. Construction Waste Disposal: Comply with waste disposal requirements in Division 01 Section "Temporary Facilities and Controls."
- i. Do not utilize storm drain system for disposal of floor stripping wastewater.

END OF SECTION 01 74 13

SECTION 01 74 19
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous construction waste.
 - 2. Recycling nonhazardous demolition and construction waste.
 - 3. Disposing of nonhazardous demolition and construction waste.

1.3 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.4 INFORMATIONAL SUBMITTALS

- A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Include the following information:
 - 1. Material category
 - 2. Generation points of waste
 - 3. Total quantity of waste in tons
 - 4. Quantity of waste salvaged, both estimated and actual in tons
 - 5. Quantity of waste recycled, both estimated and actual in tons
 - 6. Total quantity of waste recovered (salvaged plus recycled) in tons
 - 7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste

- B. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.

- C. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.

- D. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

- E. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

- F. Submittal: Letter signed by Contractor, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements have been met.

1.5 QUALITY ASSURANCE

- A. Waste Management Coordinator Qualifications: Experienced firm, with a record of successful waste management coordination of projects with similar requirements, that employs a waste management coordinator.

- B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

1.6 WASTE MANAGEMENT PLAN

- A. General: Develop a waste management plan according to ASTM E 1609 and requirements in this Section. The plan shall consist of waste identification, waste reduction work plan,

and cost/revenue analysis. Indicate quantities by weight or volume but use same units of measure throughout waste management plan.

- B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
 - 1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
 - 2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - 3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - 4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 - 5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 - 6. Hazardous materials: Indicate how and where mercury containing materials will be disposed including name, address and phone number of authorized vendor that will be responsible for the pickup, transport, & disposal & of mercury containing materials including all associated processing paperwork & recycling certifications.
 - 7. Handling and Transportation Procedures: include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

1. Comply with operation, termination, and removal requirements in Division 01 Section "Temporary Facilities and Controls".
- B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at the Project site full-time during the duration of the project.
- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.
 1. Distribute waste management plan to everyone concerned within three days of submittal return.
 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
 2. Comply with Division 01 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 RECYCLING, DEMOLITION AND CONSTRUCTION WASTE

- A. General: Recycle paper and beverage containers used by on-site workers
- B. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substance deleterious to the recycling process.
- C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.
 1. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.

2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste from Owner's property and transport to recycling receiver or processor.

3.3 RECYCLING DEMOLITION WASTE

- A. Asphalt Paving: Break up and transport paving to asphalt-recycling facility.
- B. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
 1. Pulverize concrete to maximum 1-1/2-inch size.
 2. Crush concrete and screen to comply with requirements in Division 31 Section "Earth Moving" for use as satisfactory soil for fill or sub-base.
- C. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
- D. Metals: Separate metals by type.
 1. Structural Steel: Stack members according to size, type of member, and length.
 2. Remove and dispose of bolts, nuts, washers, and other rough hardware.
- E. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.
- F. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
- G. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.
- H. Conduit: Reduce conduit to straight lengths and store by type and size.

3.4 RECYCLING CONSTRUCTION WASTE

- A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate, and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Wood Materials:

1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

C. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location.

1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.5 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Remove waste materials from Owner's property and legally dispose of them.

D. Disposal/Mercury containing materials: Remove mercury from Owner's property and legally dispose of mercury containing items. Provide records & certifications documenting the disposal.

END OF SECTION 01 74 19

SECTION 01 77 00
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Closeout requirements are hereby defined to include general requirements near the end of Contract time, in preparation for final acceptance, final payment, normal termination of Contract, occupancy of Owner, and similar actions evidencing completion of the Work. Specific requirements for individual units of Work are specified in other sections. Start of closeout other than the delivery of operation and maintenance manuals is directly related to “Substantial Completion,” and therefore, may be either a single time period for entire Work or a series of time periods for individual parts of the Work which have been certified as substantially complete at different dates. That time variation (if any) shall be applicable to other provisions of this section, regardless of whether resulting from “phased completion” originally specified by the Contract Documents or subsequently agreed upon by Owner and Contractor.

- B. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
 - 1. AIA G704 – Certificate of Substantial completion
 - 2. AIA G706 – Contractor’s Affidavit Payment Plan & Claims
 - 3. AIA G706A – Contractor’s Affidavit of Release of Liens
 - 4. AIA G707 – Consent of Surety to Final Payment
 - 5. Letter of punch list completion
 - 6. State & County Sales Tax Statement
 - 7. Contractor’s (Two) year guarantee
 - 8. Manufacturer’s Guarantee
 - 9. Waiver of Lien
 - 10. Asbestos Free Certificate
 - 11. List of Material Suppliers
 - 12. Waste Manifest Landfill Disposal tickets

1.2 SUBSTANTIAL COMPLETION

- A. Procedures: Before requesting Architect’s inspection for certification of Substantial Completion, complete the items listed below. Any exceptions or omissions from the items listed below should be explained, in writing, as part of the request.
 - 1. The Application for Payment that coincides with, or initially follows, the date Substantial Completion is claimed, indicates 100 percent completion for the portion

of the Work claimed as substantially complete. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.

- a. If 100 percent completion cannot be shown, indicate a list of incomplete items, the value of incomplete construction and reasons the Work is not complete.
2. Advise Owner of pending insurance changeover requirements.
 3. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.
 4. Discontinue, change over, or remove temporary facilities from the site. Also remove construction tools, mock-ups, and similar elements.
 5. Complete final clean up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.
 6. Deliver warranties per Section 01 78 36 – Warranties.
 7. Correction of previously identified deficiencies.
 8. Prior to date of Substantial Completion Contractor to provide a list of pending claims or disputes with associated itemized cost breakdown.
 9. Provide Owner documentation of disposal of any mercury containing materials by an authorized vendor.
- B. Inspection Procedures: After completion of the above-specified items, submit written notice to the Architect- Engineer that the Work, or designated portion thereof, is substantially complete and request an inspection of same. Include a comprehensive list of items to be completed or corrected. Proceed promptly to complete and correct items on the list. Give a minimum of ten (10) days' notice to allow the Architect-Engineer sufficient time to schedule and coordinate the inspection. On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued. The Contractor shall remedy the noted deficiencies in the work and shall send a second written notice of substantial completion to the Architect-Engineer and request another inspection. The Architect-Engineer will then:
1. The Architect will repeat inspection when requested and ensure that the Work has been substantially completed. When the Architect-Engineer concurs that the Work is substantially complete, the Architect-Engineer will:
 - a. Prepare a Certificate of Substantial Completion on AIA Document G704, accompanied by Contractor's list of items to be completed or corrected, as verified, and amended by the Architect-Engineer as a result of the substantial completion inspection.

- b. Submit the Certificate of Substantial Completion to the Owner and the Contractor for their written acceptance of the responsibilities assigned to them in the certificate. If after repeated requests (two or more) by the Contractor for the Architect to inspect the Work, it is discovered not to be “substantially complete” the Contractor shall compensate the Architect for additional inspections.
2. Results of the completed inspection will form the basis of requirements for final acceptance

1.3 FINAL ACCEPTANCE

- A. Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the items listed below. Any exceptions or omissions from the items listed below should be explained, in writing, as part of the request.
 1. Submit the final payment request with consent of surety to final payment, releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 3. Submit a certified copy of the Architect’s substantial completion inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance and the list has been endorsed and dated by the Architect.
 4. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 5. Submit record drawings
 6. Submit warranties, bonds, certifications, and letters as called for in Section 01 78 36 - Warranties.
 7. Re-clean areas soiled during correction of deficiencies.
 8. Certify that equipment and systems that have been tested, balanced, and are operational.
 9. Submit Consent of Surety.
- B. Re-inspection Procedure: Upon completion of the above-specified prerequisites, submit written notice to the Architect-Engineer that the work is complete and ready for final inspection on or after a specified date. Give a minimum of ten (10) days’ notice to allow the Architect-Engineer sufficient time to schedule and coordinate the inspection. The Architect will re-inspect the Work upon receipt of signed off punch list and notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Architect.

1. Upon completion of re-inspection, the Architect-Engineer will either prepare a certificate of final acceptance or advise the Contractor of work that is not acceptable, or obligations not fulfilled as required for final acceptance. The Contractor shall immediately take such measures as are necessary to complete such work or remedy such deficiencies.
2. If necessary, re-inspection will be repeated once. If after this re-inspection the work is discovered to be “incomplete” the Contractor shall compensate the Architect for additional inspections.

1.4 RECORD AND DOCUMENT SUBMITTALS

- A. Record Drawings: Maintain a clean, undamaged set of blue- or black-line white prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
 1. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
 2. Mark new information that is important to the Owner but was not shown on Contract Drawings or Shop Drawings.
 3. Note related Change Order numbers where applicable.
 4. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets and print suitable titles, dates, and other identification on the cover of each set.
- B. Record Specifications: Maintain one (1) completed copy of the Project Manual, including addenda and one(1) copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications. Give particular attention to substitutions, selection of options and similar information or elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related to record drawing information and product data.
 1. Upon Completion of the Work, submit record Specifications to the Engineer for the Owner’s records.
- C. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete

miscellaneous records, and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Engineer for the Owner's records.

1. Completed and signed Engineer's Punch List
2. Copy of Manufacturer's Final Inspection Report
3. Landfill Charge Tickets
4. Certificate of Compliance (Evidence Building Permit has been finalized)

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: General cleaning during construction is required by the General Conditions. The Contractor will be completely responsible for the final cleanup of the site upon completion of the Site Work phase. The Contractor will be completely responsible for final cleanup of the Project prior to Substantial Completion and Owner occupancy. Contractor shall be responsible for their own cleanup and trash removal daily and should make sure no trash is left on the job site upon completion. A high standard of cleanliness will be rigidly enforced.
- B. Cleaning: Employ workers experienced in providing quality commercial cleaning and knowledgeable of the proper cleaning chemicals to use for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion.
 - a. Remove labels that are not permanent labels.
 - b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
 - c. Clean the site, including landscape development areas of rubbish, litter, and other foreign substances. Sweep paved areas broom clean, remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth, even-textured surface.

- d. Remove debris and surface dust from limited access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - e. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from interior and exterior surfaces of fixtures, hardware, finish surfaces of equipment for a finished, sellable product prior to final inspection.
- 2. Cleaning items not completed as of Date of Substantial Completion shall be completed prior to Final Acceptance.
 - 3. Contractor is responsible for protection, repair, and final cleaning of the asphalt paving. The Contractor is also responsible for repair and or replacement of curbs damaged during construction.
- C. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
- D. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.

3.2 FINAL ADJUSTMENT OF ACCOUNTS

- A. Submit a final statement of accounting to Engineer. The statement shall reflect all adjustments to the Contract sum including the following:
 - B. The original contract sum.
 - C. Additions and deductions resulting from:
 - 1. Previous change orders.
 - 2. Allowances.
 - 3. Unit prices.
 - 4. Deductions of uncorrected work.
 - 5. Deductions of liquidated damages.
 - 6. Deductions for additional submittal reviews in accordance with Section 01 33 00 - Submittal Procedures, Reimbursement from Contractor.
 - 7. Deductions for reinspection for substantial and final completions in accordance with this Section, Substantial Completion and Final Acceptance.
 - 8. Other adjustments.

D. Total Contract sum, as adjusted.

E. Previous payments.

F. Sum remaining due.

3.3 FINAL CHANGE ORDER

A. Architect-Engineer will prepare a final change order, reflecting approved adjustments to the Contract sum which were not previously made by change orders

3.4 FINAL APPLICATION FOR PAYMENT

A. Contractor shall submit the final application for payment in accordance with procedures and requirements stated in the General Conditions.

END OF SECTION 01 77 00

SECTION 01 78 36
WARRANTIES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for warranties required by the Contract Documents including manufacturer's standard warranties on products and special warranties.
 - 1. Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.
 - 2. General close-out requirements are included in Section 01 77 00 - Closeout Procedures.
 - 3. Specific requirements for warranties for the Work and products and installations that are specified to be warranted are included in the individual Specification Sections and as indicated.
 - 4. Certifications and other commitments and agreements for continuing services to the Owner are specified elsewhere in the Contract Documents.
- B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers and subcontractors required to countersign special warranties with the Contractor.
- C. All warranties are in addition to Seller's implied warranties of merchantability and fitness for a particular purpose which shall not be disclaimed by Seller. In addition to its rights to reject nonconforming goods, The Owner shall be entitled to all rights and remedies provided by the uniform Commercial Code for breach of express warranties and implied warranties of merchantability and fitness for a particular purpose, including but not limited to consequential and incidental damages.
- D. Separate Prime Contracts: Each prime Contractor is responsible for warranties related to its own Contract.

1.2 SUBMITTALS

- A. Submit written warranties to the Engineer prior to the date certified for Substantial Completion
 - 1. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period,

submit properly executed warranties to the Engineer within fifteen (15) days of completion of that designated portion of the Work only when occupancy is substantially ahead of original planned occupancy and not identified in the schedule contained in the Contract Documents

- B. When a special warranty is required to be executed by the Contractor or the Contractor and a subcontractor, supplier, or manufacturer, prepare a written document that contains appropriate terms and identification ready for execution by the required parties. Submit a draft to the Owner through the Engineer for approval prior to final execution.
 - 1. Refer to individual Specification Sections for specific content requirements and particular requirements for submittal of special warranties.
- C. Form of Submittal: Organize the warranty documents as specified in 017700.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF WARRANTIES

- A. Schedule: Provide warranties on products and installations as indicated in Specification Sections for warranty requirements
 - 1. Roofing System Warranty as outlined in corresponding section.
 - 2. Pre-finished Sheet Metal Finish Warranty as outlined in Section 07 62 00.
 - 3. Contractor's Two (2) Year Warranty on their company letterhead using sample contained in the Project Manual.
 - a. Contractor will be required to attend a post construction field inspection no earlier than twenty -three (23) months and no later than twenty-four (24) months after the date of Substantial Completion and complete any corrective action requested by Owner, Engineer, or Manufacturer at no additional cost to the Owner.
 - 4. Contractor's Certification of Asbestos Free Compliance.

END OF SECTION 01 78 36

SECTION 04 05 23
MASONRY ACCESSORIES - MORTAR DEFLECTION MAT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Veneer cavity mortar deflection mat.

1.2 RELATED SECTIONS

- A. Section 042100 – Clay Unit Masonry: Cavity wall construction of brick veneer.

1.3 REFERENCES

- A. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

1.4 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 2 years production of similar products.
- B. Installer Qualifications: Minimum 2 years experience as a masonry installer.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer:
 - 1. Keene Building Products
 - 2. Heckmann Building Products
 - 3. Advanced Building Products, Inc.

2.2 MASONRY CAVITY MORTAR CONTROL

- A. Masonry Cavity Mortar Deflector: Three-dimensional geometric patterned masonry mortar deflection device to catch and hold mortar droppings while allowing moisture to pass through. Suspends mortar droppings above the weep holes to prevent drainage channels from becoming blocked or clogged.

B. Product:

1. Physical Characteristics:

- a. 0.4-inches thick.
- b. 10-inches (25.4 cm) high.
 - 1) 3.0-inch (7.6 cm) high continuous bottom strip.
 - 2) 7.0-inch (17.8 cm) high cuts.
- c. 4.0 feet (1.2 m) long.

2. Performance:

- a. Stop mortar from clogging weep holes.

3. Material: UV stabilized nylon.

- a. Hydrophobic compound.
- b. Resistant to chemicals.
- c. Does not support mold growth.

C. Application:

- 1. Provide at non-insulated masonry cavity walls 1.0-inches thick and as indicated or required.
- 2. Provide at insulated masonry cavity walls greater than 1.0-inches thick with additional insulation and as indicated or required.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Engineer of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 MORTAR CONTROL INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Inspection of Membrane and Wall Conditions: Ensure that the wall is free from structural defects, that any membranes or flashing are properly installed, and that the final system will have a path for moisture to escape from the wall.
- C. Installation of Mortar Control: Place a continuous strip in the cavity at all flashing locations. Place horizontally on top of the flashing with pointing upwards to ensure that the mortar droppings are broken up and deflected away from the weep holes. Mechanical attachment is not required.

END OF SECTION

SECTION 04 21 00
CLAY UNIT MASONRY

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Clay masonry units and accessories including:
 - 1. Brick units.
 - 2. Anchors and ties.
 - 3. Flashing.
 - 4. Reinforcement.
 - 5. Mortar.
 - 6. Cleaning.

1.2 REFERENCES

- A. ASTM International (ASTM):
 - 1. ASTM A 153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 - 2. ASTM C 67 - Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile.
 - 3. ASTM C 216 - Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale).
 - 4. ASTM C 270 - Standard Specification for Mortar for Unit Masonry.
 - 5. ASTM C 1088 - Standard Specification for Thin Veneer Brick Units Made from Clay or Shale.
 - 6. ASTM D 1056 - Standard Specification for Flexible Cellular Materials - Sponge or Expanded Rubber.

1.3 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- B. Samples: Furnish not less than five individual bricks as samples, showing extreme variations in color and texture to match the existing brick.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years manufacturing similar products.
- B. Installer Qualifications: Minimum 2 years installing similar products.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store brick off the ground to prevent contamination by mud, dust or other materials likely to cause staining or other defects.
- C. Cover all materials with a non-staining waterproof membrane material when necessary to protect from elements.
- D. Store different types of materials separately.

1.6 PROJECT CONDITIONS

- A. Protection of Work:
 - 1. Wall Covering:
 - a. During erection, cover top of wall with strong non-staining waterproof membrane at end of each day or shutdown.
 - b. Cover partially completed walls when work is not in progress.
 - c. Extend cover minimum of 24 inches (610 mm) down both sides.
 - d. Hold cover securely in place.
 - 2. Load Applications:
 - a. Do not apply uniform floor or roof loading for at least 12 hours after building masonry columns or wall.
 - b. Do not apply concentrated loads for at least 3 days after building masonry columns or walls.
 - 3. Stain Prevention:
 - a. Prevent grout or mortar from staining the face of masonry.
 - b. Remove immediately grout or mortar in contact with face of such masonry.
 - c. Protect all sills, ledges and projections from droppings of mortar.
 - d. Protect base of wall from rain-splashed mud and mortar splatter.
 - e. Scaffold boards shall be turned on edge when work is not in progress.
- B. Cold Weather Protection:
 - 1. Preparation:
 - a. When ice or snow has formed on masonry bed, remove by carefully applying heat not to exceed 120 degrees F (49 degrees C) until surface is dry to the touch.
 - b. Remove all masonry deemed frozen or damaged.
 - 2. Products:
 - a. When brick suction exceeds BIA reference standard, sprinkle with heated water:
 - 1) When units are above 32 degrees F (0 degrees C), heat water above 70 degrees F (21 degrees C).
 - 2) When units are below 32 degrees F (0 degrees C), heat water

- above 130 degrees F (54 degrees C).
- b. Use dry masonry units.
 - c. Do not use wet or frozen units.
3. Construction Requirements While Work is Progressing:
- a. Air temperature 40 degrees F (4 degrees C) to 32 degrees F (0 degrees C):
 - 1) Heat sand or mixing water to produce mortar temperatures between 40 degrees F (4 degrees C) to 32 degrees F (0 degrees C).
 - b. Air temperature 32 degrees F (0 degrees C) to 25 degrees F (-4 degrees C):
 - 1) Heat sand and mixing water to produce temperatures between 40 degrees F (4 degrees C) and 120 degrees F (49 degrees C).
 - 2) Maintain temperature of mortar on boards above freezing.
 - c. Air temperatures 25 degrees F (-4 degrees C) to 20 degrees F (-7 degrees C).
 - 1) Heat sand and mixing water to produce mortar temperatures between 40 degrees F (4 degrees C) and 120 degrees F. (49 degrees C).
 - 2) Maintain mortar temperatures on boards above freezing.
 - 3) Use salamanders or other heat sources on both sides of walls under construction.
 - 4) Use windbreaks when wind is in excess of 15 mph (24 kms/h).
 - d. Air temperature 20 degrees F (-7 degrees C) and below:
 - 1) Heat sand and mixing water to produce mortar temperatures between 40 degrees F (4 degrees C) and 120 degrees F (49 degrees C).
 - 2) Provide enclosures and auxiliary heat to maintain air temperature above 32 degrees F (0 degrees C).
 - 3) Minimum temperature of units when laid: 20 degrees F (-7 degrees C).
4. Protection requirements for completed masonry and masonry not being worked on:
- a. Mean daily air temperature 40 degrees F (4 degrees C) to 32 degrees F (0 degrees C):
 - 1) Protect masonry from rain or snow for 24 hours by covering with weather-resistive membrane.
 - b. Mean daily air temperature 32 degrees F (0 degrees C) to 25 degrees F (-4 degrees C):
 - 1) Completely cover masonry with weather-resistive membrane for 24 hrs.
 - c. Mean daily temperature 25 degrees F (-4 degrees C) to 20 degrees F (-7 degrees C):
 - 1) Completely cover masonry with insulating blankets or equal protection for 24 hours.

- d. Mean daily air temperature 20 degrees F (-7 degrees C) and below:
 - 1) Maintain masonry temperature above 32 degrees F (0 degrees C) for 24 hours by:
- 5. When temperature exceeds 100 degrees F or 90 degrees F with 8 mph wind (above 38 degrees C or 32 degrees C with 13 kms/h wind).
 - a. Maintain temperature of mortar and grout between 70 degrees F and 120 degrees F (21 degrees C and 49 degrees C).
 - 1) Limit spread of mortar bed to 4 feet (1.2 m). Place units within 1 minute of spreading mortar.
 - b. Partially or recently completed walls may be fog sprayed and/or covered with opaque plastic or canvas or both to control moisture evaporation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Contractor shall seek manufacturers of the brick that matches the existing.

2.2 CLAY MASONRY UNITS

- A. All brick shall match the existing brick in color and size. The contractor shall mix the new brick in with the old brick. A mock up panel shall be constructed illustrating how the two different sources of brick will appear.

2.3 ANCHORS AND TIES

- A. Truss Joint Reinforcement: ASTM A 82 steel, galvanized ASTM A 153, Class B-2.
- B. Dovetail Anchors: ASTM A 82 steel, galvanized ASTM A 153, Class B-2 AT 32" O.C.

2.4 FLASHING

- A. Asphalt-Coated Copper: 7 oz.

2.5 ACCESSORIES

- A. Weepholes:
 - 1. Plastic Weep Tubes. Place the tubes at a slope to drain the water out of the cavity 32" O.C.

2.6 MORTAR

- A. Mortar shall conform to ASTM C 270 under the guidelines provided in BIA Technical Notes #8 Series.
- B. Type N mortar matching the color of the existing mortar.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Engineer of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Cleaning Reinforcement:
 - 1. Remove mud, loose rust, ice and other coatings from reinforcement which would interfere with bond.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions and approved submittals. Comply with manufacturer's reference standards as listed in this Section.

3.4 BONDING

- A. Lay masonry in bond pattern as indicated on drawings or general notes.
 - 1. Reference BIA Technical Note No. 30 for additional requirements.

3.5 LAYING MASONRY

- A. Lay masonry with full head and bed joints.
- B. Lay all brick plumb and true to lines.
- C. Where fresh mortar joins partially set mortar, remove loose brick and mortar, and lightly wet exposed surface of set masonry.
- D. Tothing shall be subject to approval by the Engineer/Owner.
- E. When adjustment is necessary to be made after mortar begins to harden, remove hardened mortar and replace with fresh mortar.

3.6 TOOLING AND POINTING

- A. Joint Profile: Tool mortar joints to match existing.

3.7 FLASHING

- A. Clean surface of masonry from projections which might puncture flashing.
- B. Place through-wall flashing on bed of mortar.
- C. Cover flashing with mortar.
- D. Lap flashing a minimum of 6 inches (152 mm).
- E. Leave flashing project from face of wall approximately 1/4 inch (6 mm) to form a drip. Flashing shall be cut back to the face of the wall after inspection, if the drip is deemed objectionable by Engineer.

3.8 WEEPHOLES

- A. Provide weep in head joints of the first brick course immediately above flashing by placing weeps no more than 24 inches (610 mm) on center horizontally.
- B. Keep cavity free from mortar.

3.9 EXPANSION JOINTS

- A. Install expansion joints as indicated on the drawings.
- B. Keep clean from all mortar and debris.
- C. Locate as shown on drawing.
- D. Install neoprene pre-molded foam pad.
- E. Install backer rod.
- F. Install sealant. Prime surfaces if necessary.

3.10 CLEANING

- A. Cut out all defective mortar joints and holes in exposed masonry and provide new mortar.
- B. Clean (pressure wash) pre-selected sample wall area. Do not proceed with cleaning the rest of the wall until approved by Engineer.
- C. Clean (pressure wash) the brick wall from corner to conner. Do not stop in the middle of the wall.
- D. Clean all windows in the wall that have been cleaned after pressure washing.
- E. Clean brick and mortar as outlined in BIA Technical Notes 20 and in accordance with manufacturer's technical advisory note.

- F. All cleaning practices and product used shall be in accordance with cleaning products manufacturer's printed instructions.

END OF SECTION 04 21 00

SECTION 05 31 23
STEEL ROOF DECKING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Roof deck.
 - 2. Cellular roof deck.
- B. Related Requirements:
 - 1. Division 07 Sections for thermal and moisture protection

1.3 REFERENCES

- A. Refer to the following references, current edition for specification compliance:
 - 1. 2018 North Carolina Building Code
 - 2. American Society for Testing and Materials (ASTM)
 - 3. American National Standard
 - a. ANSI/SPRI ES-1 Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems
 - 4. Underwriters Laboratories, Inc. (UL)
 - 5. FM Global/Factory Mutual Research (FM)

1.4 SUBMITTALS

- A. Refer to Section 01 33 00-Submittal Procedures for Submittals.
- B. Manufacturer's Product Data Sheets for all materials specified certifying material complies with this specification.

1.5 QUALITY ASSURANCE

The Contractor is responsible for quality control, including workmanship and materials furnished by his subcontractors and suppliers.

- A. Codes and Standards: Comply with provisions of the following codes and standards except as otherwise indicated or specified:
 - 1. "Design Manual for Composite Decks, Form Decks, and Roof Decks", as published by the Steel Deck Institute (SDI).
 - 2. "Specification for the Design of Cold Formed Steel Structural Members", as published by the American Iron and Steel Institute (AISI).

- B. Factory Mutual Listing: Provide steel roof deck units which have been evaluated by Factory Mutual Research Corporation and are listed as an approved product in "Factory Mutual Research Approval Guide 2006- Building Materials".

1.6 DELIVERY STORAGE AND HANDLING

- A. Protect steel deck from corrosion, deformation, and other damage during delivery, storage, and handling.
- B. Stack steel deck on platforms or pallets and slope to provide drainage. Protect with a waterproof covering and ventilate to avoid condensation.
 - 1. Protect and ventilate acoustical cellular roof deck with factory-installed insulation to maintain insulation free of moisture.
- C. Keep construction loads and stored materials, including other decking, off steel deck until it is permanently fastened and inspected.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. ASC Steel Deck.
 - 2. Canam Steel Corp.
 - 3. Cordeck
 - 4. Epic Metals Corporation.
 - 5. Marylyn Steel Decks, Inc.
 - 6. Nucor Corp.; Vulcraft Division.
 - 7. United Steel Deck, Inc.
 - 8. Valley Jost, Inc.
 - 9. Verco Manufacturing Co.
 - 10. Wheeling Corrugating Company.

2.2 MATERIALS

A. ROOF DECK

- 1. Double-Pan Cellular Units: Composite units consisting of upper fluted-section combined with lower flat plate section having interlocking side laps in the lower flat plate section.
 - a. Type "B" – 18 ga./20 ga. Decking with minimum 20-gauge lower flat plate.

2.3 FINISH

- A. Galvanizing: Steel deck shall be galvanized with a protective zinc coating conforming to ASTM A653 G90.

- B. Galvanizing Repair Paint: High zinc-dust content paint for repair of damaged galvanized surfaces complying with Department of Defense Specifications DOD-P-21035.

2.4 ROOF DECK ACCESSORIES

- A. Provide minimum 20-gauge inside or outside closure channels angles or plates, minimum 20-gauge butt strips at change of deck directions, and minimum 20 gauge filler sheets.

2.5 MECHANICAL FASTENERS

- A. Self-Drilling Screw Fasteners: Provide corrosion-resistant, hexagonal head, steel self-drilling screws, austempered to a core hardness of Rockwell C 50.
- B. Subject to compliance with requirements, provide products of one of the following manufacturers:
 - 1. ITWBuildex
 - 2. Grabber Construction Products
 - 3. SFS Intec Fastening Systems, Inc.
 - 4. Textron Fastening Systems
- C. Side-Lap Fasteners: Corrosion-resistant, hexagonal washer head; self-drilling, carbon-steel screws, No. 12 minimum diameter.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. General: Install deck units and accessories in accordance with manufacturers recommendations and approved shop drawings, and as specified herein:
 - 1. Place deck units on supporting framework and adjust to final position with accurately aligned side laps and ends bearing 2" minimum on supporting members before being permanently fastened. Do not stretch or contract side lap interlocks. Place the end joint over a chord angle for deck bearing on steel bar joists.
 - 2. Place deck units in straight alignment for entire length of run of cells and with close alignment between cells at ends of abutting units.
 - 3. Place deck units flat and square (relative to supporting members), secured to adjacent framing without warp or excessive deflection.
 - 4. Do not use roof deck units for storage or working platforms until permanently secured.
- B. Attachment of Roof Deck:
 - 1. The method of attachment, attachment pattern, and side lap fastener type and spacing shall be as shown on the drawings and comply with the requirements noted below.
 - 2. Method of Attachment: The attachment method noted in the drawings shall comply with the applicable requirements below.

- a. Self-Drilling Fasteners: Comply with the manufacturer's requirements to install the screws through all layers of the deck material and the manufacturer's required embedment into the supporting member.
3. Side Lap Fastening: Unless required otherwise by provisions of this specification, side laps of adjacent units shall be fastened by #12 (min.) TEK screws so that spacing between supports and fasteners does not exceed the value prescribed on the drawings. Button Punching is not allowable as a side-lap fastener.
4. End Bearing: Provide a minimum end bearing of 2" over supports.
5. End Joints: End joints of sheets shall be lapped 2" minimum over supports. Decks that slope 1/4 inch or more in 12 inches in the long direction shall be erected beginning at the low side to ensure that end laps are shingle fashion.
6. Underwriters Laboratories Wind Uplift Classification Requirements: Unless a more stringent attachment requirement is specified elsewhere in this specification or on the drawings, roof deck units shall be attached to the supporting structure as required by the Construction Number specified elsewhere in this section.

3.2 INSPECTION

- A. Contractor shall inspect substrates to receive rough carpentry, and ensure substrates are in satisfactory condition prior to installation of rough carpentry.
- B. Contractor shall inspect all new and existing rough carpentry including fasteners for material condition before proceeding with installation. Deteriorated, rotted, damaged, split, warped, twisted, or wet materials shall be removed and replaced with specified materials. Refer to Section O1 22 00-Unit Prices.
- C. Contractor shall remove old cants, tapered edge strips, debris, old fasteners, etc. that interfere with the installation of new rough carpentry.
- D. Contractor shall notify Engineer in writing of unsatisfactory conditions.
- E. Commencement of work signifies Contractor's acceptance of substrates. Any defects in roofing work resulting from such accepted substrates shall be corrected at no additional expense to the Owner.
- F. Cutting and Fitting: Cut and neatly fit deck units and accessories around other work projecting through or adjacent to the decking.

3.3 TOUCH UP PAINTING

- A. Touch-up galvanized surfaces with galvanizing repair paint applied in accordance with manufacturer's instructions.

END OF SECTION 05 31 23

SECTION 06 10 00
ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Rough Carpentry work required to facilitate installation of new roof assembly including:
1. Installation of new pressure treated wood blocking and plywood sheathing.
 2. Re-securement of existing rough carpentry to remain in place.
 3. Removal and replacement of damaged, rotted or deteriorated rough carpentry to match existing.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Specification Sections, apply to this Section, including but not limited to:

1.3 REFERENCES

- A. Refer to the following references, current edition for specification compliance:
1. 2012 North Carolina Building Code
 2. American Society for Testing and Materials (ASTM)
 3. American Wood-Preserver's Association (AWPA)
 - a. AWPA C1 All Timber Products-Preservative Treatment by Pressure Process
 - b. AWPA C2 Lumber, Timber, Bridge Ties and Mine Ties - Pressure Treatment by Pressure Processes.
 - c. AWPA C9 Plywood - Preservative Treatment by Pressure Processes
 - d. AWPA C15 Wood for Commercial-Residential Construction Preservative Treatment by Pressure Process.
 4. American Plywood Association (APA)
 5. American National Standard
 - a. ANSI/SPRI ES-1 Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems
 6. Underwriters Laboratories, Inc. (UL)
 7. FM Global/Factory Mutual Research (FM)

1.4 DEFINITIONS

- A. Rough Carpentry includes carpentry work not specified as part of other Sections and generally not exposed.
- B. KDAT: Kiln Dried After Treatment

1.5 SUBMITTALS

- A. Refer to Section 01 33 00-Submittal Procedures for Submittals.
- B. Manufacturer's Product Data Sheets for all materials specified certifying material complies with this specification.

1.6 QUALITY ASSURANCE

- A. Contractor shall inspect wood to be installed for damage, warping, splits, and moisture content as defined by the applicable wood products industry standards. Materials that do not comply shall be rejected.
- B. Rough carpentry installation shall present a smooth, consistent substrate for roof system and flashing installation.
- C. Qualifications of workers: Provide sufficient, competent, and skilled carpenters in accordance with accepted practices and supervisors who shall be present at all times during execution of this portion of the work, and who shall be thoroughly familiar with type of construction involved in this section and related work and techniques specified.
- D. Moisture Content:
 - 1. Treated wood products shall be KDAT.
 - 2. Treated lumber used in the roofing assembly shall not be stored or installed in a manner exposing it to rain.
 - 3. Moisture content of treated lumber shall be 19 percent or less before being covered/enclosed into roofing assembly.
 - 4. Contractor shall be responsible for ensuring lumber is delivered, stored and installed at 19% or less moisture content.
 - 5. Plywood shall be 18% or less before being covered/enclosed into roofing assembly.
- E. Each piece of treated lumber and plywood shall bear the stamp of the AWWA Quality Mark, indicating compliance with the requirements of the AWWA Quality Control Program.
- F. Lumber Standards: Comply with PS 20 and applicable rules of respective grading and inspecting agencies for species and products indicated.
- G. Plywood Product Standards: Comply with PS 1 (ANSI A 199.1) or, for products not manufactured under PS 1 provisions, with applicable APA Performance Standard for type of panel indicated.

- H. Installation of all required new rough carpentry for roofing and flashing terminations to ensure plumb, uniform and level metal flashings.
- I. Rough carpentry installation shall ensure roof membrane flashing transitions are smooth for complete roof drainage and appearance.
- J. Installation of all fasteners and associated materials to secure rough carpentry as detailed and specified.

1.7 DELIVERY STORAGE AND HANDLING

- A. Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Store a minimum of four inches above ground on framework or blocking. Stack lumber as well as plywood and other panels; provide for air circulation within and around stacks. Cover with protective waterproof covering providing for adequate air circulation and ventilation.
- B. Exposure to precipitation during shipping, storage or installation shall be avoided. If material does become wet, it shall be replaced or permitted to dry prior to covering or enclosure by other roofing, sheet metal or other construction materials (except for protection during construction).
- C. Immediately upon delivery to job site, place materials in area protected from weather. Do not store seasoned materials in wet or damp portions of building.
- D. Protect sheet materials from corners breaking and damaging surfaces, while unloading.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Lumber: Shall Be No. 2 or better spruce or southern yellow pine. Shall be sound, thoroughly seasoned, dressed to nominal finish dimension, and free of warpage, cupping, and bowing. Dimensions shall be determined by job conditions or as indicated in detail drawings.
- B. Plywood Sheathing: Shall be structural 1 rated. Plywood shall be stamped APA RATED SHEATHING grade-C or better and shall be manufactured with exterior glue (exposure 1). Plywood shall have a minimum thickness of 3/4 inch or as required to match existing.
- C. Fire Treated: A flame spread index of 25 or less (Class A) when tested in accordance with ASTM E84 and labeled as fire resistant. All wood in the roof assembly shall be fire treated.

2.2 FASTENERS

- A. General:
 - 1. All fasteners shall be stainless steel or as approved by Engineer.
 - 2. Fasteners securing pressure treated lumber shall be manufactured for corrosion

resistance and exposures associated with pressure treated wood applications.

3. Nails shall not be used at roof edges to fasten rough carpentry, lumber, plywood, etc. Screws, anchors, and/or machine bolts shall be used to secure rough carpentry at roof perimeter edges.
4. Masonry screws, spikes, and drive-pins shall not be used to fasten edge/perimeter nailers to concrete decks. Minimum ½" diameter anchors or bolts shall be used to secure roof edge nailers to concrete substrates.

B. Wood to light gage steel framing (16-ga. or less):

1. Shall be #14-13 DPI, pancake or panhead, corrosion resistant, ASTM A153, FM Approved, self-drilling and self-tapping screw, length to provide minimum 3 pitches of thread through metal thicknesses. Acceptable manufacturers include:
 - a. ITW Buildex Teks
 - b. Concealor®
 - c. Blazer
 - d. SFS Intec
 - e. Engineers accepted equivalent.

C. Wood to wood:

1. Screws: No. 10 or greater, stainless steel wood screws with flat head, or insulation screws. Length to embed into base substrate a minimum of 1-1/2".
2. Nails: 8, 10 or 16 penny, stainless steel, ring shank nails. Length to embed into base substrate a minimum 1-1/2". Acceptable manufacturers include:
 - a. Maze Nails
 - b. Anchor Staple and Nail
 - c. Swan Secure Products
 - d. Manasquan Premium Fasteners
 - e. Engineers accepted equivalent.

D. Wood to Masonry:

1. Drive Pins: 1/4", stainless steel drive pins with mushroom head. Length to embed into base substrate a minimum of 1-1/4".
2. Screws: 1/4" or greater, stainless steel masonry screws with flat or hex head. Length to embed into base substrate a minimum of 1-1/2".

PART 3 – EXECUTION

3.1 INSPECTION

- A. Contractor shall inspect substrates to receive rough carpentry, and ensure substrates are in satisfactory condition prior to installation of rough carpentry.
- B. Contractor shall inspect all new and existing rough carpentry including fasteners for material condition before proceeding with installation. Deteriorated, rotted, damaged, split, warped, twisted, or wet materials shall be removed and replaced with specified materials. Refer to Section 01 22 00-Unit Prices.
- C. Contractor shall remove old cants, tapered edge strips, debris, old fasteners, etc. that interfere with the installation of new rough carpentry.
- D. Contractor shall notify Engineer in writing of unsatisfactory conditions.
- E. Commencement of work signifies Contractor's acceptance of substrates. Any defects in roofing work resulting from such accepted substrates shall be corrected at no additional expense to the Owner.

3.2 PREPARATION

A. Steel/Metal Substrates:

- 1. Any pressure treated wood to contact steel or metal shall have the steel/metal coated with a heavy coating of asphalt primer.

B. Roof Deck and Structure:

- 1. Roof deck and structure shall be dried and broomed and/or vacuumed clean of debris and foreign matter prior to installation of the new rough carpentry.
- 2. Contractor shall adjust substrates to receive rough carpentry to ensure completed rough carpentry installation is acceptable for roofing and sheet metal flashings.
- 3. Steel decking shall be coated with a uniform, heavy application of asphalt primer, or separated by membrane or other acceptable means to prevent contact between steel and treated wood products.
- 4. Treated lumber shall not make direct contact with light gage steel decking.

3.3 INSTALLATION

- A. Remove existing damaged or deteriorated wood blocking, nailers, and curbs and replace with new material of same dimensions.
- B. Re-secure all existing wood nailers at roof edges that are to remain. Fastener type and spacing shall comply with this specification.
- C. Install new wood blocking, nailers, and curbs to achieve a minimum eight-inch flashing height above the roof membrane. Wood nailers at perimeter roof edges and expansion

joints shall be installed to match insulation height. Maintain constant nailer height at perimeter edges.

- D. Wood blocking and nailers shall be installed concurrently with roof system installation. Removal of insulation and/or folding back of roof membrane to install wood blocking and nailers at a later date is not acceptable.
- E. Set rough carpentry to required levels and lines, with members plumb, true to line, material cut to fit, and braced to hold work in proper position. Use a belt sander to remove any obtrusive surface irregularities. Drive nails and spikes home; and pull bolt nuts tight with heads and washers in close contact with the wood
- F. Fit rough carpentry to other construction, scribe and cope for accurate fit. Correlate location of furring, nailers, blocking, grounds, and similar supports to allow attachment of other construction. AU joints between wood shall be installed for a smooth transition.
- G. Attachment:

- 1. The Contractor shall consult the fastener manufacturer's published literature and follow the recommended requirements for pre-drilling, cleaning, placement, and compatibility of substrates. Follow manufacturer's requirements for fasteners spacing, substrate preparation and substrate embedment where not specified.
- 2. Rough carpentry attachment shall meet the requirements herein and that of the current FM Loss Prevention Data Sheet 1-49, Perimeter Flashing.
- 3. Install bolts flush with the top surface of nailers where possible to avoid countersinking. Bolt bottom nailers then fasten upper nailers where possible. Countersink bolts, nuts and screws flush with wood surfaces only as detailed.
- 4. Install fasteners without splitting wood. Pre-drill where necessary. Split or damaged wood shall be removed or repaired and/or re-secured to provide acceptable conditions.
- 5. For anchors, pre-drill concrete and masonry units to prevent damage or cracking of the masonry. Consult fastener manufacturer's published guides. Damaged masonry shall be repaired, and fasteners shall be removed and re-installed in an acceptable location.
- 6. Fastener spacing: Fasteners shall be staggered $\frac{1}{3}$ the board width and installed within 6" of each end.
 - a. Screws securing wood to wood shall be installed 12 inches apart, staggered, with two screws installed within 6 inches of each end of nailer lengths to prevent wood from twisting at board joints.
 - b. Self-drilling, and/or pre-drilled self-tapping screws securing wood to structural steel shall be spaced 12 inches apart, staggered, with one screw within 6 inches

of each end of nailer lengths to prevent wood from twisting at board joints.

- c. Nails securing wood to wood shall be spaced 12 inches apart, staggered, with two nails installed within 6 inches of each end of nailer lengths to prevent wood from twisting at board joints.
 - H. Select fasteners of size and length that will not be exposed from the building interior and/or from the ground, or remove protruding fasteners, paint or finish to eliminate exposure.
 - I. Thickness of wood nailers shall be flush with adjacent insulation and other materials. Additional fasteners shall be installed to ensure nailers are flush.
 - J. Unless otherwise detailed, plywood used as blocking or shim shall be installed below dimensional lumber such that the fastener head terminates at the dimensional lumber surface.
 - K. Wood nailers at roof perimeters, expansion joints, roof area dividers, etc. shall not be less than 3 feet long.
 - L. When multiple nailers are installed stacked two high or more, offset nailers no less than 12" such that joints at nailer end do not line-up vertically.
 - M. Each end of nailers shall be fastened with additional fasteners to ensure a smooth transition at butted joints, and to prevent warping and/or twisting.
 - N. Shims:
 - 1. The Contractor shall add plywood and lumber shims as required for the specified height and thickness.
 - 2. Shims shall make full contact with stacked rough carpentry. Partial shim contact, and small shim pieces spaced apart are not acceptable.
 - 3. Plywood used as blocking or shim shall be installed below dimensional lumber such that the fastener head terminates at the dimensional lumber surface.
 - O. Curbs:
 - 1. Adjust wood curbs to support rooftop piping, ducts, equipment, etc.
 - 2. Raise equipment to provide required flashing height for roofing.
- 3.4 CLEAN-UP
- A. The Contractor shall ensure the site and building are cleaned to meet pre-construction conditions, as accepted by the Owner.
 - B. The site and building shall be free of saw dust from pressure treated lumber, fasteners and other debris.

- C. Damages to the building, grounds, equipment, and site shall be repaired or replaced by the Contractor to meet pre-construction conditions, as accepted by the Owner.

END OF SECTION 06 10 00

SECTION 07 24 00
INSULATION & FINISH SYSTEM (EIFS)

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Manufacturer's requirements for the proper design, use, and installation of an Exterior Insulation and Finish System.

1.2 REFERENCES

- A. ASTM B117 Test Method for Salt Spray (Fog) Testing
- B. ASTM C203 Standard Test Method for Breaking Load and Flexural Properties of Block-Type Thermal Insulation
- C. ASTM C1135 Test Method for Determining Tensile Adhesion Properties of Structural Sealants
- D. ASTM D968 Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
- E. ASTM D1037 Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials
- F. ASTM D2247 Practice for Testing Water Resistance of Coatings in 100 Percent Relative Humidity
- G. ASTM D2294 Standard Test Method for Creep Properties of Adhesives in Shear by Tension Loading (Metal-to-Metal).
- H. ASTM D2794 Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)
- I. ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
- J. ASTM E84 Test Method for Surface Burning Characteristics of Building Materials.
- K. ASTM E108 Standard Test Methods for Fire Tests of Roof Coverings
- L. ASTM E119 Standard Test Method for Fire Tests of Building Construction and Materials.
- M. ASTM E330 Test Method for Structural Performance by Uniform Static Air Pressure Difference.
- N. ASTM E331 Test Method for Water Penetration by Uniform Static Air Pressure Difference.
- O. ASTM E695 Method for Measuring Relative Resistance to Impact Loading.

- P. ASTM E2134 Standard Test Method for Evaluating the Tensile-Adhesion Performance of an Exterior Insulation and Finish System (EIFS)
- Q. ASTM E2273 Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies
- R. ASTM E2430 Standard Specification For Expanded Polystyrene (“EPS”) Thermal Insulation Boards For Use In Exterior Insulation and Finish Systems (“EIFS”)
- S. ASTM E2485 Standard Test Method for Freeze/Thaw Resistance of Exterior Insulation and Finish Systems (EIFS) and Water Resistive Barrier Coatings
- T. ASTM E2486 Standard Test Method for Impact Resistance of Class PB and PI Exterior Insulation and Finish Systems (EIFS)
- U. ASTM E2568 Standard Specification for Exterior Insulation and Finish Systems
- V. ASTM G155/ G153 Accelerated Weathering for Exposure of Nonmetallic Materials.
- W. Fed. Spec. Coating, Textured (For Interior and Exterior Masonry Surfaces) TT-C-555B
- X. MIL STD 810B Military Standard, Environmental Test Methods

1.3 ASSEMBLY DESCRIPTION

A. Standard

An Exterior Insulation and Finish System (EIFS) consisting of three dimensional drainage mat, Expanded Polystyrene Insulation (EPS) Board, Mechanical Fasteners, Base Coat with embedded Reinforcing Fabric Mesh, Primer, and Finish Coat. This system is installed over a code compliant water resistive barrier.

General:

- a. Insulation Board: At system termination, completely encapsulate insulation board edges by mesh reinforced base coat, substrate or drainage track (limited to terminations at foundation). The use of and maximum thickness of insulation board shall be in accordance with applicable building codes and EIFS manufacturer’s requirements.
- b. Flashing: Flashing shall be continuous and watertight. Flashing shall be designed and installed to prevent water infiltration behind the cladding.
- c. The configuration of the water resistive barrier, drainage plane and flashing must allow for the egress of incidental moisture.
- d. Inclined surfaces shall follow the guidelines listed below:
 - (1) Minimum slope: 6 in (152 mm) of vertical rise in 12 in (305 mm) of horizontal run.
 - (2) For sloped surfaces, run of slope shall be a maximum of 12 in (305 mm).
 - (3) Usage not meeting above criteria shall be approved in writing prior to installation.

2. Performance Requirements
 - a. System to meet the performance and testing requirements of the International Code Council Acceptance Criteria AC 219
 - b. Shall meet the testing requirements of the Product Performance Sheet.
3. Substrate Systems:
 - a. Shall be engineered to withstand applicable design loads including required safety factor.
 - b. Maximum deflection of substrate system under positive or negative design loads shall not exceed L/240 of span.
 - c. Substrate dimensional tolerance: Flat within 1/4 in (6.4 mm) in any 4 ft (122 cm) radius.
 - d. Surface irregularities: Sheathing not over 1/8 in (3 mm); masonry not over 3/16 in (4.8 mm).
4. Impact Resistance Classification:
 - a. Standard Impact Resistance, 25-49 in-lbs (2.8 – 5.6 J) Impact Range
5. Expansion Joints: Continuous expansion joints shall be installed at the following locations in accordance with manufacturer's recommendations:
 - a. At building expansion joints.
 - b. At substrate expansion joints.
 - c. At floor lines in wood frame construction.
 - d. Where EIFS panels abut one another.
 - e. Where EIFS abuts other materials.
 - f. Where significant structural movement occurs, such as at
 - (1) Changes in roof line.
 - (2) Changes in building shape and/or structural system.
 - g. Where substrate changes
 - h. Substrate movement and expansion and contraction of EIFS and adjacent materials shall be taken into account in design of expansion joints, with proper consideration given to sealant properties, installation conditions, temperature range, coefficients of expansion of materials, joint width to depth ratios, and other material factors. Minimum width of expansion joints shall be as follows:
 - (1) 1/2 in (12.7 mm) where EIFS abuts other materials.
 - (2) 3/4 in (19 mm) when EIFS abuts the EIFS.
 - (3) Matching existing locations of expansion joints.
6. Manufacturer's Detail:

- a. EIFS latest published information shall be followed for standard detail treatments.
 - b. Non-standard detail treatments shall be as recommended by manufacturer, approved by Project Designer and be part of the Contract Documents.
7. Building Code Conformance: EIFS shall be acceptable for use on this project under building code having jurisdiction.

1.4 QUALITY ASSURANCE

- A. Products manufactured under ISO 9001:2000 Quality System.
- B. Qualifications:
 1. All EIFS assembly materials must be manufactured or sold by a single-source manufacturer and must be purchased direct from the manufacturer or its authorized distributor.
 2. Applicator:
 - a. Must have attended manufacturer's Educational Seminar.
 - b. Must possess a current manufacturer's certificate of education.
 - c. Must be experienced and competent in installation of plaster-like materials.
- C. Regulatory Requirements:
 1. Insulation Board: Shall be produced and labeled under a third-party quality program as required by applicable building code.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver materials in original packaging with manufacturer's identification.
- B. Storage: Store materials in a cool, dry location, out of sunlight, protected from weather and other harmful environment, and at a temperature above 40°F (4°C) and below 110°F (43°C) in accordance with manufacturer's instructions.

1.6 PROJECT / SITE CONDITIONS

- A. Installation Ambient Air Temperature: Minimum of 40°F (4°C) and rising and remain so for 24 hours thereafter.
- B. Substrate Temperature: Do not apply materials to substrates whose temperature are below 40°F (4°C) or contain frost or ice.
- C. Inclement Weather: Do not apply materials during inclement weather unless appropriate protection is employed.
- D. Sunlight Exposure: Avoid, when possible, installation of the materials in direct sunlight. Application of Acrylic Finishes in direct sunlight in hot weather may adversely affect aesthetics.

- E. Materials shall not be applied if ambient temperature exceeds 120°F (49°C) or falls below 40°F (4°C) within 24 hours of application. Protect materials from uneven and excessive evaporation during hot, dry weather.
- F. Prior to installation, the substrate shall be inspected for surface contamination, or other defects that may adversely affect the performance of the materials and shall be free of residual moisture.

1.7 COORDINATION AND SCHEDULING:

- A. Coordination: Coordinate water-resistive membrane & air barrier coating materials installation with other construction operations.

1.8 WARRANTY

- A. Warranty: At completion of installation, provide manufacturer's Standard Limited Warranty.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Secondary Water-Resistive Barrier
 - 1. Code Compliant Water Resistive Barrier.
 - 2. Flashing Membrane: Self-sealing, Polyester faced, rubberized asphalt membrane, 30 mils (0.76 mm) thick.
- B. Insulation Board: In compliance with manufacturer's requirements for Standard System EIFS.
 - 1. Produced and labeled under a third-party quality program as required by applicable building code.
 - 2. Shall conform to ASTM C578 and ASTM E2430, for Molded Expanded Polystyrene Insulation board.
 - 3. Maximum size shall be 2 ft x 4 ft (610 mm x 1219 mm).
 - 4. Thickness: 1.5 in, minimum (38 mm) or matching existing after rasping.
- C. Base Coats:
 - 1. 121 Base Coat: 100% acrylic polymer base, requiring the addition of Portland cement.
 - 2. 121 Dry Base Coat: Copolymer based, factory blend of cement and proprietary ingredients requiring addition of water.
 - 3. 302 ABC-N1 Base Coat & Adhesive: 100% acrylic polymer base, ready to use, applied without the addition of cement.

4. 121 Dry HI: High Impact basecoat & adhesive. Copolymer based, blend of cement and proprietary ingredients, requires the addition of water.
5. 121 Cool Base: White basecoat & adhesive. Copolymer based, blend of cement and proprietary ingredients, requires the addition of water.

D. Reinforcing Mesh:

1. Standard Mesh: Weight 4.5 oz. per sq. yd. (153 g/sq m); coated for protection against alkali.
2. Short Detail Mesh: Reinforcing mesh used for back wrapping and details.
3. Self-Adhesive Detail Mesh: Reinforcing mesh used for complex details.

E. Primer:

1. 100% acrylic-based coating to prepare surfaces for acrylic or elastomeric finishes.

F. Finish

1. 100% acrylic polymer-based finish, enhanced DPR acrylic finish with hydrophobic and photocatalytic properties, repels water, reflects UV rays, and reduces smog particles near the finish surface. Finish type, texture and color as selected by Project Designer

G. Water: Clean, cool, potable water

H. Portland Cement: ASTM C150, Type I or Type I-II.

2.2 RELATED MATERIALS AND ACCESSORIES

A. Substrate Materials:

1. Glass mat gypsum sheathing conforming to ASTM C1177.
2. Cement Fiber Sheathing conforming to ASTM C1186
3. Gypsum Sheathing: Minimum 1/2 in (13 mm) thick, core-treated, weather-resistant, exterior gypsum sheathing complying with ASTM C79.
4. Plywood: Minimum 7/16 in (8 mm) thick exterior grade or PS 1, Exposure 1, minimum 7/16 in thick, C veneer facing out, panels gapped 1/8 in at all edges.
5. Other approved by manufacturer writing prior to the project.

B. Drainage Mat: 3-dimensional Drainage

C. Mechanical fasteners and washers:

1. Fasteners, non-thermal bridging polypropylene plastic plates and corrosion-resistant screws.
2. Washer, 2" diameter, polypropylene plastic plates with appropriate fasteners for framing.

3. 2" diameter, polypropylene plastic plates with appropriate fasteners for framing.
4. Lock Washer, 2" -3" diameter, polypropylene plastic plates with appropriate fasteners for framing.

E. Sealant System:

1. Sealant for expansion joints between panelized EIFS sections shall be ultra-low modulus designed for minimum 100% elongation and minimum 50% compression and as selected by Project Designer.
2. Sealant for perimeter seals around window and door frames and other wall penetrations shall be low modulus, designed for minimum 50% elongation and minimum 25% compression, and as selected by Project Designer.
3. Sealants shall conform to ASTM C 920, Grade NS.
4. Expansion joints between sections of EIFS shall have a minimum width of 3/4 in (19 mm) or match existing expansion joint.
5. Perimeter seal joints shall be a minimum width of 1/2 in (12.7 mm) or match existing expansion joint.
6. Sealant backer rod shall be closed-cell polyethylene foam.
7. Apply sealant to tracks or base coat of EIFS.
8. Refer to EIFS manufacturer's current bulletin for listing of sealants which have been tested and have been found to be compatible with EIFS materials.
9. Color shall be as selected by Project Designer.
10. Joint design, surface preparation, and sealant primer shall be based on sealant manufacturer's recommendations and project conditions.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify project site conditions.
- B. Compliance: Comply with manufacturer's instructions for installation.
- C. Substrate Examination: Examine prior to installation of EIFS assembly materials as follows:
 1. Substrate shall be of a type approved by manufacturer. Plywood and OSB substrates shall be gapped 1/8 in (3.2 mm) at all edges.
 2. Substrate shall be examined for soundness, and other harmful conditions.
 3. Substrate shall be free of dust, dirt, laitance, efflorescence, and other harmful contaminants.

4. Substrate construction in accordance with substrate material manufacturer's specifications and applicable building codes.
 5. Maximum deflection of the substrate shall be limited to L/240.
- D. Sealants and Backer Rod: To be installed, where required, in accordance with the sealant manufacturer's specifications and published literature, and using the sealant manufacturer's recommended primers.
- E. Advise Contractor of discrepancies preventing proper installation of the EIFS materials. Do not proceed with the work until unsatisfactory conditions are corrected.

3.2 PREPARATION

- A. Protection: Protect surrounding material surfaces and areas during installation of system.
- B. Clean surfaces thoroughly prior to installation.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 MIXING

- A. Mix materials in accordance with manufacturer's instructions.

3.4 APPLICATION

- A. General: Installation shall conform to this specification and manufacturer's written instructions.
- B. Drainage Accessories and Water Resistive Barrier
 1. Install drainage tracks (limited to terminations at foundations), back-wrap mesh, or edge-wrap mesh at system terminations.
 2. Flash all rough openings with water-resistive barrier and embedded Sheathing Tape or Peel and Stick Flashing Membrane
 3. Install water resistive barrier in accordance with manufacturer's instructions making all laps weatherboard fashion to provide continuity of water shedding.
 4. Install drainage mat with temporary fasteners to hold in place until insulation board is mechanically fastened.
- C. Insulation Board
 1. Install Wind-lock fasteners to secure insulation board to the wall in accordance instructions. Minimum eight (8) fasteners per 2' x 4' (610 mm x 1219 mm) piece of insulation board.
 2. Install insulation board without gaps in a running bond pattern and interlocked at corners.
 3. Rasp irregularities off insulation board.

- D. Apply primer to base coat after drying. Primer may be omitted if it is not required by the manufacturer's product data sheets for the specified finish coat or otherwise specified for the project.
- E. Finish Coat: Apply finish coat to match specified finish type, texture, and color. Do not apply finish coat to surfaces to receive sealant. Keep finish out of sealant joint gaps.

3.5 CLEAN-UP

- A. Removal: Remove and legally dispose of EIFS materials from job site.
- B. Clean surfaces and work area of foreign materials resulting from material installation.

3.6 PROTECTION

- A. Provide protection of installed materials from water infiltration into or behind them.
- B. Provide protection of installed materials from dust, dirt, precipitation, and freezing during installation, and continuous high humidity until fully cured and dry.
- C. Clean exposed surfaces using materials and methods recommended by the manufacturer of the material or product being cleaned. Remove and replace work that cannot be cleaned to the satisfaction of the Project Designer/Owner.

END OF SECTION 07 24 00

SECTION 07 54 19
THERMOPLASTIC (PVC) MEMBRANE ROOFING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes thermoplastic membranes for the following applications:
 - 1. Roof membranes:
 - a. Field Membrane
 - b. Flashing membrane.

1.3 ACTION SUBMITTALS

- A. Product Data: For each thermoplastic product indicated.
- B. Product Certificates: For each type of thermoplastic membrane and accessory.
- C. Thermoplastic Membrane Schedule: Include the following information:
 - 1. Membrane application.
 - 2. Membrane manufacturer and product name.

1.4 INFORMATIONAL SUBMITTALS

- A. Manufacturers Contractor Certification Certificate, manufacturer's literature, and materials list for proposed roof assembly.
- B. MSDS sheets are required for all materials and products to be used during the performance of the work. MSDS sheets are to be submitted with the submittals.
- C. The Contractor shall submit in writing on the form provided, that all materials to be used on the project do not contain asbestos.
- D. System shall be designed to meet a minimum wind uplift rating of 90# per square foot as tested and listed by FM Global or Underwriters Laboratories with corner and perimeter enhancements.

- E. System shall have a class A fire resistance rating per UL.

1.5 QUALITY ASSURANCE

- A. The roofing system shall be applied only by a Roofing Applicator authorized by one or more of the membrane manufacturers listed in the product section of the specifications.

1.6 WARRANTY

- A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

- 1. Warranty Period: Two years from date of Substantial Completion.

- B. Special Manufacturer's Warranty: A Manufacturer's NDL Warranty for the roofing materials shall be part of this contract and paid for by this contractor as part of the base bid and delivered to the Owner at the completion of the Project. The warranty shall start after the acceptance of the owner.

- 1. Warranty Period: Twenty years from date of Substantial Completion/acceptance of owner.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

Materials shall be delivered to the job site dry and undamaged. Materials shall be stored in van trailers and/or completely covered with waterproof tarpaulin coverings (lightweight tarpaulins will be acceptable when properly secured) Vinyl or polyethylene sheets or insulation shipping wrappers are not suitable covering and material so stored will be marked, rejected, and removed from the site. Materials shall remain on the original shipping pallets or placed on raised platforms to keep them off the ground or storage surface. All rolled goods shall be stored on pallets or raised platforms ON END and not laid flat on the storage surface. Damaged or "flattened" rolls will be rejected and removed from the job site. Materials shall be brought to the roof as needed for a day's application.

The Base Bid is open to any of the following or an owner approved equal.

A. SINGLE PLY PVC ROOFING MEMBRANE

- 1. Fibertite (SM-FB), 45 MIL SM-FB
 - 2. Sarnafil (G410 Feltback), 60 MIL

3. Tremco 60MIL Tremply KEE FB
4. Carlisle Syntec 60 MIL Fleece Back
5. Siplast Parasolo PVC KEE Fleece Back 60 MIL
6. Durolast DFC60 Fleece Back 60 MIL

B. INSULATION/RIGID BOARD INSULATION

1. Sarnafil Sarnatherm
2. Fibertite FTR Value
3. Tremco Trisotech
4. Carlisle Secure Shield
5. Siplast Paratherm
6. Duro-Guard polyisocyanurate

C. INSULATION/OVERLAYMENT/RECOVER BOARD

¼" Silicone Impregnated Fiberglass Faced Gypsum Board shall be overlay board per manufacturer acceptance.

1. ¼" Dens Deck Prime as manufactured by Georgia Pacific or equal.
2. ¼" Securock as manufactured by USG
3. ¼" Dexcell as manufactured by National Gypsum C.

D. ADHESIVES:

1. Membrane Adhesive:
All membrane adhesives must be coordinated with membrane manufacturer to meet requirements for specified NDL warranty.
2. Insulation Board Adhesive
All insulation board adhesives must be coordinated with membrane manufacturer to meet requirements for specified NDL warranty.

E. WALKWAY MATERIAL

All walkway surface, pads, or sheets must be coordinated with membrane manufacturer to meet requirements for specified NDL warranty.

F. SEALANTS AND PITCH POCKET FILLERS

All sealants and pitch pocket fillers must be coordinated with membrane manufacturer to meet requirements for specified NDL warranty.

2.2 MISCELLANEOUS MATERIALS

- A. Wood Nailer - Fire treated wood nailers shall be installed at the perimeter of the entire roof and around such other roof projections and penetrations as specified on Project Drawings. Thickness of nailers must match the insulation

thickness to achieve a smooth transition. Wood nailers shall be treated for fire and rot resistance (wolmanized or osmose treated) and be #2 quality or better lumber. Creosote or asphalt-treated wood is not acceptable. Wood nailers shall conform to Factory Mutual Loss Prevention Data Sheet 1-49. All wood shall have a maximum moisture content of 19 percent by weight on a dry-weight basis.

- B. Plywood- When bonding directly to plywood, a minimum $\frac{3}{4}$ " inch (12 mm) CDX (C side out), smooth-surfaced exterior grade plywood with exterior grade glue shall be used. Plywood shall have a maximum moisture content of 19 percent by weight on a dry weight basis.
- C. Tapered edge strips shall be fabricated from wood fiber insulation material complying with ASTM Specification C—208 cut to taper from 0" to 1-1/2" in the 12" or 18" dimension.
- D. Cant strips shall be fabricated from wood fiber insulation and shall comply with ASTM Specification C-208. Cant shall be cut to fit at 45 degrees. Cant strip will be a maximum of four inches (4").
- E. MECHANICAL FASTNERS
 - 1. Capped Nails-Simplex Large (round) Head Felt Nails, 1-1/2"
 - 2. Threaded Fasteners-All threaded fasteners used to secure the insulation, roof system or accessory components shall be approved by the membrane manufacturer. Contractor's submittal shall include complete listing of fasteners to be used for this installation.
 - 3. Masonry Expansion Fasteners: Hilti Metal Hit-Anchor (lead base), $\frac{1}{4}$ " X 1-1/4" minimum, longer fasteners may be required for some applications.
 - 4. Simplex Hardened Masonry Nails, 1-1/2"
 - 5. Nail Manufacturers
 - a. Maze Nails
 - b. Simplex
 - c. Hilti
 - d. Cobra
 - e. Red Head
- F. TERMINATION BAR
 - 1" x 1/8" Aluminum termination bar pre-punched 6" O.C.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for

compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
2. Remove laitance and form-release agents from concrete.
3. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - a. Metal.
 - b. Glass.
 - c. Glazed surfaces of ceramic tile.

- B. Joint Priming: Prime joint substrates were recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193

for use of joint sealants as applicable to materials, applications, and conditions indicated.

- C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of sealant backings.
 - 2. Do not stretch, twist, puncture, or tear sealant backings.
 - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 - 1. Place sealants so they directly contact and fully wet joint substrates.
 - 2. Completely fill recesses in each joint configuration.
 - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

3.2 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.3 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION 07 54 00

SECTION 07 62 00
SHEET METAL FLASHING & TRIM

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to this Section.

1.2 SUMMARY

- A. Fabrication and installation of sheet metal materials, both shop and field manufactured.

1.3 REFERENCES

- A. Refer to the following references for specification compliance:
 - 1. 2018 North Carolina Building Code
 - 2. American Society for Testing and Materials (ASTM)
 - 3. National Roofing Contractors Association (NRCA)
 - 4. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)

1.4 DEFINITIONS

- A. Flashing: In shop fabrication of metal flashing, followed by installation.

1.5 SUBMITTALS

- A. Product Data: For each type of product indicated. Include material descriptions, product data sheets, material safety data sheets and literature verifying physical properties and available colors of materials.
- B. Pre-finished sheet metal and sealant color chart
- C. Shop drawings for any transitions and/or terminations not depicted in Contract Drawings.
- D. Warranties: Sample of any special warranties.

1.6 QUALITY ASSURANCE

- A. Obtain metal from a single source manufacturer to the greatest extent possible.

- B. Installation shall comply with the contract drawings and SMACNA Architectural Sheet Metal Manual.
- C. Contractor to check the availability of the selected color in both 24 and 22 gage.
- D. Ensure work is free of leaks in all weather conditions.
- E. Workmanship shall be first-class in every respect. The sheet metal work shall be assembled and secured in accordance with these specifications, the manufacturer's requirements and referenced standards.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver to site the fabricated items in timely manner.
- B. Storage: Store materials within areas designated or approved by the Owner. Ensure materials remain dry, covered and not in contact with the ground.
- C. Handling: Handle materials in such a manner as to preclude damage and contamination.

1.8 PROJECT CONDITIONS

- A. Install all items in strict accordance with all published safety, weather, or applicable regulations of the manufacturer and local, state, and federal agencies which have jurisdiction.
- B. Always protect the building and its components from the elements.
- C. Coordinate all phases of work.

1.9 WARRANTY

- A. A Two-Year Contractors Warranty for sealant application in which the contractor agrees to repair work sections that fail due to workmanship within specified warranty period.
- B. Pre-finished sheet metal manufacturer's thirty (30) year finish warranty from the date of substantial completion.

PART 2 – PRODUCTS

2.1 PRE-FINISHED STEEL

- A. ASTM A 653, AISI G90 zinc coated sheets, commercial steel, extra smooth, primed and finished on one side with Kynar/Hylar based fluoropolymer coating of 1.0 mil total dry film thickness, and on the reverse side, with a wash coat of 0.3 to 0.4 mil dry film thickness. A strippable plastic film should protect the finish during fabrication and installation. Manufacturer's standard color to be selected by owner.

1. 24 gauge

- a. Flashing
- b. Counter flashing
- c. Collector head
- d. Downspout
- e. Flush Panels
- f. Batten Panels

2.2 GALVANIZED STEEL

- A. ASTM, A 653, AISI G90 galvanized steel, mill finish.

2.3 STAINLESS STEEL

- A. 18-gauge, Type 304 as tested in accordance with ATSM A 167.

1. ZEE

2.4 FASTENERS

- A. Roofing Nails: 11-gauge stainless steel ring shank roofing nails with diamond point, minimum 3/8" diameter head and 1 1/4" length.
- B. Screws: #12 stainless steel hex or pan head screws with length to penetrate substrate a minimum of 1 1/2".
- C. Concrete and Masonry Anchors: 1/4" diameter metal-based expansion anchor with stainless steel pin of length to penetrate substrate a minimum of 1 1/2".
- D. Washers: Shall be stainless steel with neoprene gasket backing. Shall be 9/16" diameter for use with #12 screws and 5/8" diameter for use with 1/4" diameter concrete and masonry anchors.
- E. Rivets: #44 stainless steel rivets with stainless steel mandrel. Length of rivet to properly fasten sheet metal components. Rivets shall be factory painted to match adjacent sheet metal.

2.5 RELATED MATERIALS

- A. Self-adhering Membrane: 40-mil minimum thickness sheet; slip-resistant surfacing, polyethylene-film-reinforced top surface laminated to SBS-modified asphalt adhesive, with release paper backing; suitable for high temperature applications up to 250 degrees. Acceptable products include:
 - 1. Mid-States Asphalt Quik-Stick HT Pro
 - 2. Grace Ice and Water Shield HT
 - 3. TAMKO: Moisture guard plus

- B. Polyurethane Sealant: One-component elastomeric gun grade polyurethane sealant conforming to ASTM C 920, Type S, Grade NS, Class 25, and use NT, M, A, G or O As required by substrate conditions. Color to match adjacent materials.
- C. Silicon Sealant: Shall be a one-component, non-sag, 20-year warranty, neutral cure, low-modulus, UV resistant, high performance silicone sealant. Shall meet ASTM C 920, Type S, Grade NS, Class 100, Use M, G, A or O. Color to match adjacent materials.
- D. Sealant Tape: Minimum ½" wide non-skinning butyl sealant tape.
- E. Solder: 20-80 tin-lead alloy conforming to ASTM B32.
- F. Flux: Muriatic acid killed with zinc, or an accepted brand of commercial soldering flux designed for use with 20-80 solder.

PART 3 – EXECUTION

3.1 GENERAL:

- A. All metal flashings and accessories are to be installed as noted in the drawings or specifications.
- B. Metal flashings and accessories shall not be face fastened unless specified and/or approved in writing prior to installation of fasteners through metal faces. If face fastening is stipulated, only screw or expansion type fasteners will be acceptable.
- C. Any deviation from these specifications and drawings must be approved prior to installation. Shop drawings of alternate details shall be submitted to the Owner and approved, or the materials installed shall be removed and replaced in accordance with the drawings/specifications at the discretion of the Owner.
- D. Metal counterflashing, gravel stop and closures extending over or across expansion joints in the roof or walls shall be interrupted and metal closures installed to accommodate anticipated movement of structural sections.
- E. Use fasteners of the same base metal as the accessory metal to be secured or when this is not possible, cover the exposed portion of the fastener with caulking material to eliminate galvanic response between the metals. Fasteners fabricated from compatible metals will be acceptable (stainless steel screws/bolts with aluminum, brass fasteners with copper).
- F. All exposed edges of metal flashings and accessories shall be hemmed to a minimum of 3/8". Exposed ends of metal flashings and accessories shall be closed by fabricating a watertight metal closure to cover the exposed end of metal components and mechanically attached to adjacent metal components.

- G. Prior to installation of the metal flashing seal the area around the penetration with plastic roofing cement, one-part urethane foam or cement mortar. If the hole around the penetration is excessively large, cut, and fit No. 15 asphalt saturated organic felt around the penetration prior to the application of sealant material.

3.2 COUNTERFLASHING:

- A. The tops of all membrane base flashings not protected by waterproofing membranes or other closures shall be closed with metal counterflashing in accordance with the specifications and drawings. Metal counterflashing shall lap over tops of membrane base flashing a minimum of three (3") inches at all locations.
- B. New metal counterflashing to be installed into existing or new reglets and shall be fabricated with a ½" wide hemmed metal flange to fit into the receiver, a 1-1/2" wide vertical securement flange and a spring-lock metal section to overlap tops of membrane flashings a minimum of three (3") inches. Counterflashing shall be secured by screw or expansion type fasteners installed through the securement flange spaced nine (9") inches on center. The reglet opening shall be caulked using caulking material specified herein.
- C. Inside and outside corners of counterflashing's shall be field fabricated with metal lapped a minimum of one (1") inch at the corner juncture secured by sealant and pop rivets installed one (1") inch on center with horizontal legs extending away from the corner a maximum of eighteen (18") inches.
- D. Metal sections shall be lapped and interlocked three (3") inches with a bead of caulk applied at the center of the lap between metal sections at joints.
- E. Configuration of metal counterflashing shall be "spring-lock" unless existing conditions prevent installation of metal of such configuration.
- F. Surface mounted counterflashing shall be installed ONLY at locations indicated on drawings or as approved in writing prior to installation. Surface mounted counterflashing shall be installed only to flush, smooth surfaces at areas where the roof surface varies in elevation along perimeter walls.
- G. Surface mounted counterflashing shall be fabricated in a spring lock configuration with a caulk receiver along the top edge a minimum of ½" wide, hemmed to eliminate raw metal edges and formed to allow a minimum ¼" bead of caulk between the outer edge of the metal receiver and the wall surface. The vertical securement flange shall be 1 ½" wide with holes pre-punched nine (9") inches on center. Width shall be sufficient to allow installation/securement of the securement flange over the top of membrane flashings and to overlap tops of membrane flashings a minimum of three (3") inches.
- H. Surface mounted counterflashing shall be installed with the vertical securement flange set over a solid ¼" diameter bead of polysulfide base caulk, secured with screw or

expansion type fasteners installed through pre-punched holes. The top caulk receiver shall be immediately caulked so that the caulk provides a positive slope to the exterior face of the counterflashing.

3.3 METAL FLANGE FLASHING:

- A. All metal flanges to be stripped to the roofing membrane shall be primed with asphalt primer and allowed to dry prior to application of stripping plies. Metal flanges shall be set on top of the roofing membrane in a continuous 1/8" thick application of asphalt flashing cement (ASTM D-2822 type II). Strip the flanges to the roof membrane using modified bituminous flashing materials. Stripping plies shall be set in one piece as much as possible. When stripping plies must be installed in two pieces, lap the modified bituminous membrane at a center overlap a minimum of three (3") inches. Stripping material shall extend onto the roof surface a minimum of four (4") inches.
- B. Modified bituminous stripping shall be set in the manufacturer's approved adhesive. Fuse bonding of modified bituminous stripping will be permissible only when approved in writing by the Owner.

3.4 METAL EDGE ASSEMBLIES:

- A. Install metal edge assemblies in ten (10') feet lengths with a minimum number of pieces in each run. Inside and outside corners shall be field, or shop fabricated with horizontal legs extending from corner junctures a maximum eighteen (18") inches. The horizontal flange on inside corners shall be filled with a fill section of metal to form a continuous three (3") inch wide stripping flange at the corner juncture area. Metal sections shall be "broken" at expansion joints and building control joints to allow for structural expansion/contraction without displacement of accessory metal. Perimeter metal edging shall be secured on the face side with a continuous metal cleat (hook strip) fabricated from metal at least one gage heavier than the accessory metal and in general compliance with recommendations for hook strips listed in Factory Mutual Loss Prevention Data Bulletin 1-49. Intermittent cleats will be acceptable if existing conditions do not permit the use of continuous cleats. The decision will be made by the Owner's representative on the site.
- B. Gravel Stops/Eave Strips shall be fabricated in the configuration depicted on the drawings. Horizontal metal flanges shall be a minimum of three (3") inches wide or 1/2" narrower than the width of the wood nailer to which it is to be attached.
- C. Metal section ends shall be butted with a 1/4" wide gap between sections and the joints closed using six (6") inch wide joint covers set into a solid bed of plastic roofing cement (excepting at gutters and rake edges where sections shall be lapped three (3") inches and sealed between lapped metal sections with plastic roofing cement). At gutters, metal sections shall be lapped three (3") inches with a liberal application of plastic roofing cement between metal contact surfaces at the overlap.

3.5 PITCH PANS:

- A. Install pitch pans in the areas indicated on the drawings. Vertical flanges shall be a minimum of four (4") inches high with top edges hemmed a minimum of ½". Corners of flanges shall be filled with metal sections soldered to adjacent metal to form a continuous flange around the pitch pan base. The vertical open joint shall be secured with a minimum of two (2) No. 8 X ½" pan head sheet metal screws and where possible the joint shall be soldered after installation. All pitch pans installed around singular penetrations shall be covered with weather caps attached and sealed to the penetration a maximum of three (3") inches above the pitch pan top edge or closed with metal form closures.
- B. Fill the pitch pan approximately ½ full of non-shrink cementitious grout. Fill the balance of the pitch pan with pourable sealer. Install weather caps or top closures over pitch pans.

3.6 WEATHERCAPS:

- A. Weather caps shall be installed over all penetration flashings except at plumbing vents or other like conditions where flashing metal is turned into the tops of pipes, or the penetration is otherwise integrally secure against water entry. Weather caps/storm collars shall be mechanically secured to penetrations as shown in the drawings. Securement of the weather cap to the penetration by sealant or caulk alone will not be acceptable. Weather caps shall be fabricated from the same base metal as the penetration to which it is to be attached.
- B. Where installation of weather caps is impractical or impossible, the Contractor shall fabricate and install a two-part metal closure over the pitch pan or penetration flashing. The juncture of the closure sections shall be caulked and secured with screws or pop rivets. The closure shall be fabricated from the same type of metal as the pitch pan/penetration flashing and shall be mechanically secured to the vertical sides of the flashing.

3.7 METAL BASE FLASHING AT STACKS:

- A. Metal base flashing for stacks/chimneys shall be fabricated from stainless steel with a conical shape closure for the penetration. The top of the metal base flashing shall extend a minimum of eight (8") inches above the roof surface. The horizontal metal flange shall be round, minimum three (3") inches wide and be soldered and sealed to the conical vertical section to form a watertight closure.

3.8 SOIL STACK/VENT PIPE FLASHING:

- A. Soil stacks/vent pipes shall be sealed and flashed using pre-formed 16 oz. copper flashings of the appropriate size for the pipe extension. The roofing membrane shall be run tightly around the pipe penetration and the penetration juncture sealed with plastic roofing cement prior to installation of the flashing.

- B. Set the copper flashing over the pipe extending through the roofing membrane with the horizontal flashing flange set into a solid 1/8" thick layer of plastic roofing cement. Apply a thin continuous layer of plastic roofing cement over the top surface of the copper flange. Strip the flange to the roofing membrane using modified bituminous flashing materials fuse bonded to the metal and to the top surface of the adjacent roofing membrane. The stripping ply shall extend a minimum of six (6") inches beyond the metal onto the roof surface. Trim the top of the copper flashing so that it extends approximately one (1") inch above the top of the pipe and bend the copper into the pipe opening to form a complete watershed into the pipe.
- C. If soil stacks/vent pipes are too long to close with standard flashing, cut the pipe to allow proper installation of the pre-formed copper flashing or shop fabricate top closures for the copper flashing to extend into the pipe opening one (1") inch and extend down over the outer surface of the flashing a minimum of three (3") inches. If local ordinances or job conditions prohibit shortening of the soil stack/vent pipes, the pipes shall be flashed using shop fabricated 16 oz copper metal flashings formed in two pieces—a soldered and sealed base sized to fit each individual pipe size twelve (12") inches high with a minimum twelve (12") inch diameter round stripping flange and a watertight sleeve top closure extending into the pipe opening two (2") inches and down over the metal base flashing a minimum of three (3") inches. Horizontal metal flanges shall be stripped to the roofing membrane in accordance with the requirements of this section of the specifications.

3.9 METAL COPING:

- A. Metal coping shall be installed in the areas indicated on the roof plan. A continuous waterproofing membrane shall be installed under all metal coping to waterproof tops of walls prior to installation of coping sections. Metal coping shall be fabricated from the specified metal of a configuration in general compliance with the drawings. Provision shall be made to insure positive slope of the metal coping section top surfaces toward the roof side. Standing metal seam joints shall be made at every joint.
- B. Vertical faces (front and rear) of the coping metal shall extend below the top of the wall a minimum of two inches. Metal coping sections shall be maximum ten feet in length unless otherwise agreed upon in writing.
- C. Standing seam joint ends shall be fabricated to form a mitered corner. Corner joints shall be standing seam with a minimum one-inch overlap on vertical faces. The overlap shall be sealed with caulk and secured by pop rivets installed one inch on center. Corner sections shall not extend more than 24" from the corner in either direction.
- D. Metal coping sections shall be secured on the face side by a continuous metal cleat secured to the wood nailer. Cleat (Hook Strip) requirements shall be as established in Factory Mutual Loss Prevention Data Bulletin 1-49, allowing for face dimension of the cleat, or as indicated on the drawings.

- E. Inside vertical surfaces of coping sections shall be secured to the wood nailers installed on the wall top using #8 stainless steel screws of appropriate length with inherent steel and neoprene washers installed through elongated, pre-punched holes spaced twelve inches on center.

3.10 CAULKING/SEALANTS:

- A. Counterflashing receivers, metal junctures, closures and masonry shall be caulked with the material specified in the material section herein. Caulking and/or sealants shall be of a color to most closely match the surface to which they are to be applied.
- B. All joints and surfaces to receive caulking/sealant shall be completely clean and free of foreign material and debris prior to application of caulk/sealant. Rake existing caulking from joints so that no weathered caulk remains on any surface to which new caulk is to come in contact. Surfaces with protective coatings with which new caulking/sealant will come in contact shall be cleaned with Xylol or an appropriate solvent cleaner to remove protective films and/or oils. Where joints are deeper than $\frac{1}{2}$ " , polyethylene joint backing shall be installed in the joint to within $\frac{1}{2}$ " of the joint surface. Joint backing shall be of a size to allow for a minimum of 30% compression of the backing when installed in the joint. Joints $\frac{1}{2}$ " to $\frac{3}{4}$ " wide shall receive backing so that the depth of the joint to receive caulking does not exceed $\frac{1}{2}$ ". Sealant shall be applied with an appropriate caulking gun through a nozzle opening of such diameter to allow complete filling of the joint with a uniform bead of sealant. All beads shall be tooled immediately after application to insure firm contact with the inner surfaces of the joint. Excess material is to be "struck-off" with a tooling stick or knife. Finished sealant bead is to be flush with adjacent surfaces.
- C. Joint openings more than one (1") inch in width shall be sealed by closure. Do not attempt to caulk joints where the backer rod is not wide enough to be properly compressed in the joint opening.
- D. Contractor shall follow manufacturer's instructions.

3.11 COLLECTOR HEADS / DOWNSPOUTS:

- A. New collector heads and downspouts shall be fabricated and installed in accordance with the attached drawings and roof plan(s).
- B. Downspout sections shall be fabricated from ten-foot stock metal with a minimum of joints in any given run. Where pre-finished metal downspouts are specified, all joints and connections shall be made by sealing all surfaces with epoxy sealant and mechanically secured using $\frac{1}{8}$ " pop rivets 2" on center or minimum one per side or plane of the surfaces connected. Where stainless steel or galvanized steel is specified, all joints and connections shall be soldered solid.

- C. Downspouts shall be secured to the vertical wall/surface, five feet on center, with hangers fabricated two inches wide and secured to the wall with two mechanical fasteners. Downspouts shall be one inch smaller than the bottom section of the collector head.

3.12 FIELD QUALITY CONTROL AND INSPECTIONS

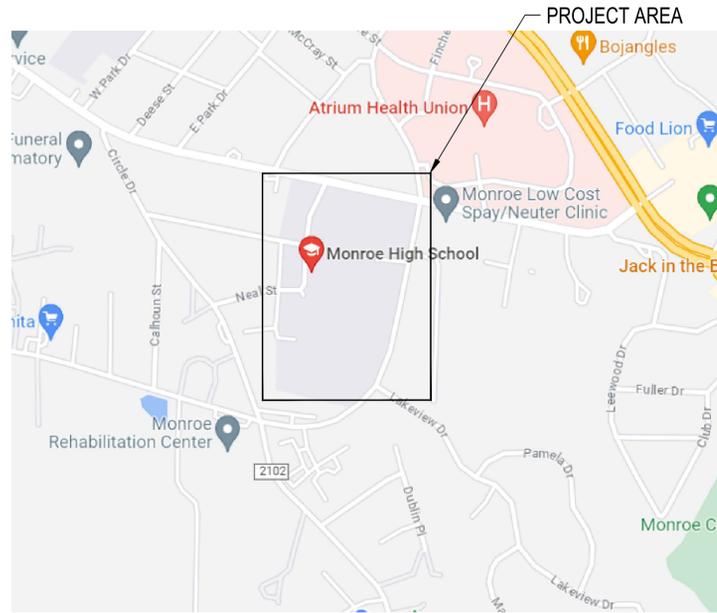
- A. Site Condition: Leave all areas around job site free of debris, roofing materials, equipment, and related items after completion of job.
- B. Notification of Completion: Notify the manufacturer by means of manufacturer's printed Notification of Completion form of job completion to schedule a final inspection date.
- C. Final Inspection/Post-Installation Meeting: Hold a meeting at the completion of the project, attended by all parties that were present at the pre-job conference. A punch list of items required for completion shall be compiled by the Contractor and the manufacturer's representative. Complete, sign, and mail the punch list form to the manufacturer's headquarters.
- D. Issuance of the Guarantee: Complete all post installation procedures and meet the manufacturer's final endorsement for issuance of the specified guarantee

3.13 CLEANING AND PROTECTION

- A. General:
 - 1. Contractor to remove protective film after installation.
 - 2. Clean any material off the metal according to the instructions from the manufacturer.
 - 3. All joints shall be neat and without any openings.

END OF SECTION 07 62 00

2023-UCPS-R-3-MONROE HIGH SCHOOL ROOF RENOVATION PROJECT 1 HIGH SCHOOL DR. MONROE, NC, 28112



SITE MAP

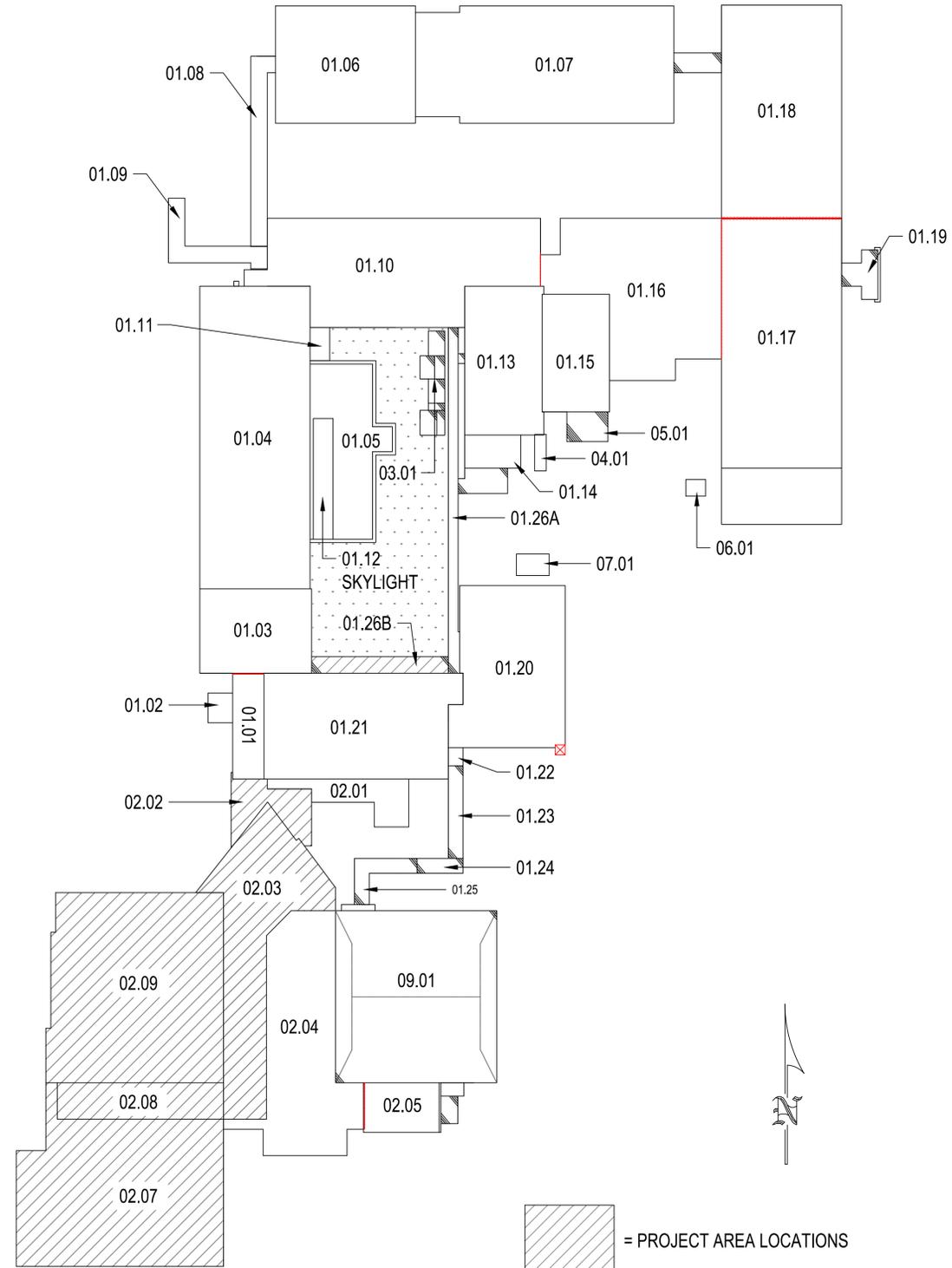


PROJECT LOCATION

SITE MAP

LIST OF DRAWINGS

- C01 COVER
- AP1 APPENDIX "B"
- DP01 DETAIL PLAN
- DP02 DETAIL PLAN
- DP03 DETAIL PLAN
- R-1 ROOF DETAILS
- R-2 ROOF DETAILS
- R-3 ROOF DETAILS
- R-4 ROOF DETAILS
- RA-1 ROOF ACCESSORIES
- UP1 WIND UPLIFT PLAN
- UP2 WIND UPLIFT PLAN
- IR INFRARED SURVEY



1 SITE PLAN
C01 SCALE: NONE

= PROJECT AREA LOCATIONS

LINETYPE LEGEND

- CONDENSATION LINE
- GAS LINE
- GUTTER
- ELECTRICAL CONDUIT
- EXPANSION JOINT
- PVC PIPE

LEGEND

VENT	LADDER	PENETRATION	SCUPPER
SOIL VENT	ROOF DRAIN	SCUTTLE	SPLASH PAN
CURB FAN	HOT STACK	CURB	SAMPLE
DOWN SPOUT	SLEEPER	COLLECTOR HD	REMOVE
DETAIL TARGET			



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1 HIGH SCHOOL DR.
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MARK	DATE	DESCRIPTION
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COVER

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C01

PAGE NUMBER

FOR CONSTRUCTION

2018 APPENDIX B BUILDING CODE SUMMARY FOR ALL COMMERCIAL ROOF PROJECTS (EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

Name of Project: Union County Public Schools- Monroe High School Roof Renovation
Address: 1 High School Dr., Monroe, NC, 28112
Owner/Authorized Agent: Penny Helms Phone # (704) 296-6320 Mail: penny.helms@ucps.k12.nc.us

CONTACT: Table with columns for Designer, Firm, Name, License #, Telephone #, E-Mail. Includes contact info for Wolf Trail Engineering.

2018 NC CODE FOR: Roof Replacement, Roof Recover, Roof Repair
CONSTRUCTED: (date) 1985
CURRENT OCCUPANCY(S) (Ch. 3) : Educational Group E

BASIC BUILDING DATA
Construction Type: I-A, II-A, III-A, IV, V-A
Sprinklers: No, Partial, Yes
Standpipes: No, Yes
Fire District: No, Yes (Primary)

Table with columns: STORIES, AREA A, AREA B, AREA C, AREA D, AREA E, AREA F, AREA G, TOTAL. Shows total area of 31,400 sq. ft.

2018 NC Administrative Code and Policies Appendix B for Roof

FIRE PROTECTION REQUIREMENTS NA No Change

Table with columns: BUILDING ELEMENT, FIRE SEPARATION DISTANCE (FEET), DETAIL # AND SHEET #, DESIGN # FOR RATED ASSEMBLY.

STRUCTURAL DESIGN (PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

DESIGN LOADS: Importance Factors, Live Loads, Ground Snow Load, Wind Load. Includes Vult 120 MPH, Vasd 93 MPH.

2018 NC Administrative Code and Policies Appendix B for Roof

Union County Public Schools, Monroe High

Table for Roof Area...02.02 showing EXISTING ROOF SYSTEM with columns for MATERIAL, PRODUCT, WEIGHT, R-VALUE, COMMENTS.

Table for Roof Area...02.02 showing PROPOSED ROOF SYSTEM with columns for MATERIAL, PRODUCT, WEIGHT, R-VALUE, COMMENTS.

Union County Public Schools, Monroe High

Table for Roof Area...02.03, 02.07 & 02.08 showing EXISTING ROOF SYSTEM with columns for MATERIAL, PRODUCT, WEIGHT, R-VALUE, COMMENTS.

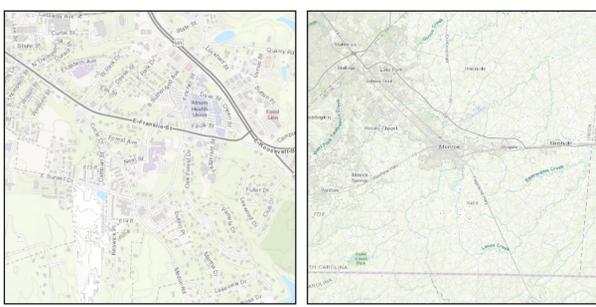
Table for Roof Area...02.03, 02.07 & 02.08 showing PROPOSED ROOF SYSTEM with columns for MATERIAL, PRODUCT, WEIGHT, R-VALUE, COMMENTS.

Union County Public Schools, Monroe High

Table for Roof Area...02.09 showing EXISTING ROOF SYSTEM with columns for MATERIAL, PRODUCT, WEIGHT, R-VALUE, COMMENTS.

Table for Roof Area...02.09 showing PROPOSED ROOF SYSTEM with columns for MATERIAL, PRODUCT, WEIGHT, R-VALUE, COMMENTS.

ASCE 7 Hazards Report
Address: 1 High School Dr, Monroe, North Carolina 28112
Standard: ASCE/SEI 7-22
Risk Category: III
Soil Class: Default
Latitude: 34.972344
Longitude: -80.526889
Elevation: 599.6456488310487 ft (NAVD 88)



Wind Results table showing Wind Speed, 10-year MRI, 25-year MRI, 50-year MRI, 100-year MRI, 300-year MRI, 700-year MRI, 1,700-year MRI, 3,000-year MRI, 10,000-year MRI, 100,000-year MRI, 1,000,000-year MRI.

Data Source: ASCE/SEI 7-22, Fig. 26.5-1C and Figs. CC.2-1-CC.2-4, and Section 26.5.2
Date Accessed: Tue Jul 11 2023

ASCE 7 Hazards Report
Snow provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-22 Standard. Wind speeds correspond to approximately a 3% probability of exceedance in 50 years (annual exceedance probability = 0.008, MRI = 1,700 years). Values for 10-year MRI, 25-year MRI, 50-year MRI and 100-year MRI are Service Level Ground Snow Loads.
Allowable Stress Design Ground Snow Load: 19.6 lb/ft^2
20-year MRI Value: 7.72 lb/ft^2
Site is within a mapped region as defined in ASCE 7-22 Section 26.2.
Mapped Elevation: 555.0 ft
Data Source: ASCE/SEI 7-22, Figures 7.6-1 and 7.6-2 A-D
Date Accessed: Tue Jul 11 2023

Values provided are ground snow loads. In areas designated "case study required," extreme local variations in ground snow loads preclude mapping at this scale. Site-specific case studies are required to establish ground snow loads at elevations not covered.

Snow load values are mapped to a 0.5 mile resolution. This resolution can create a mismatch between the mapped elevation and the site-specific elevation in topographically complex areas. Engineers should consult the local authority having jurisdiction in locations where the reported 'elevation' and 'mapped elevation' differ significantly from each other.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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2023-UCPS-R-3-MONROE HIGH SCHOOL ROOF RENOVATION PROJECT
1 HIGH SCHOOL DR.
MONROE, NC, 28112

Table with columns: MARK, DATE, DESCRIPTION. Shows entry 0-00-0000 with description XXXXXXXX.

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APPENDIX B

SHEET TITLE

AP-1

PAGE NUMBER

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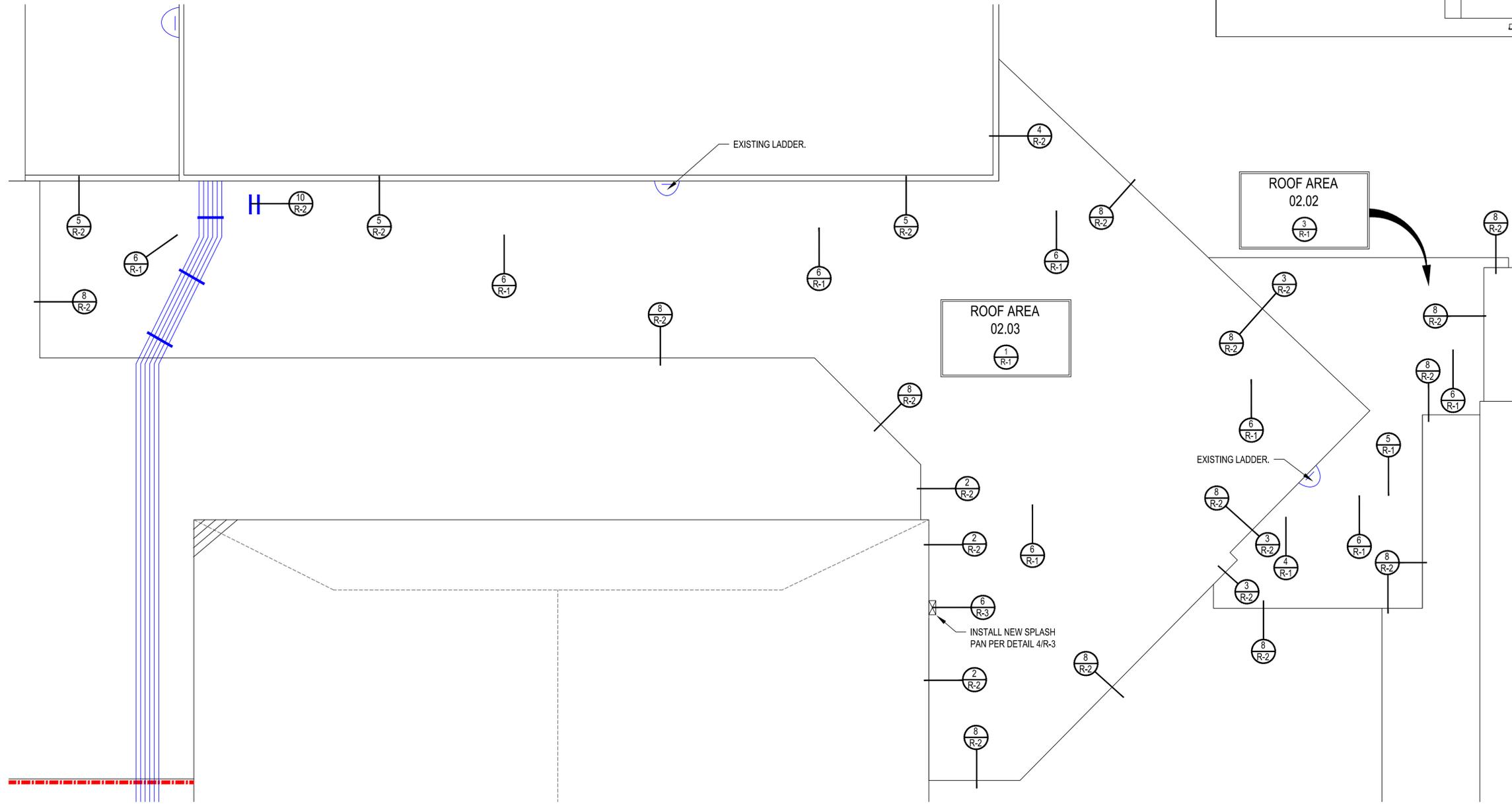
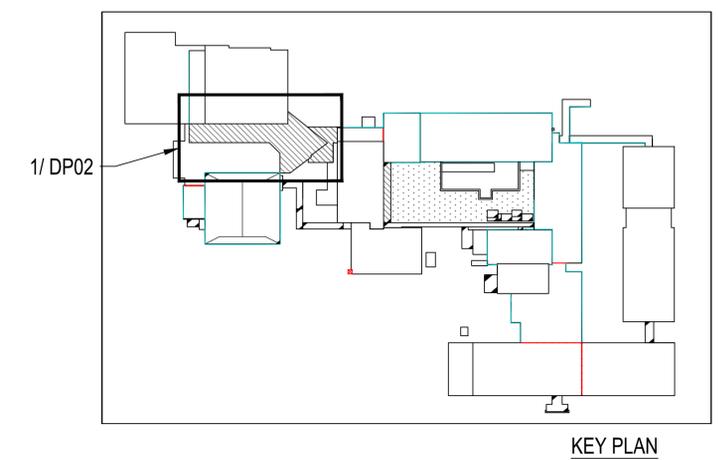
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DETAIL PLAN

SHEET TITLE

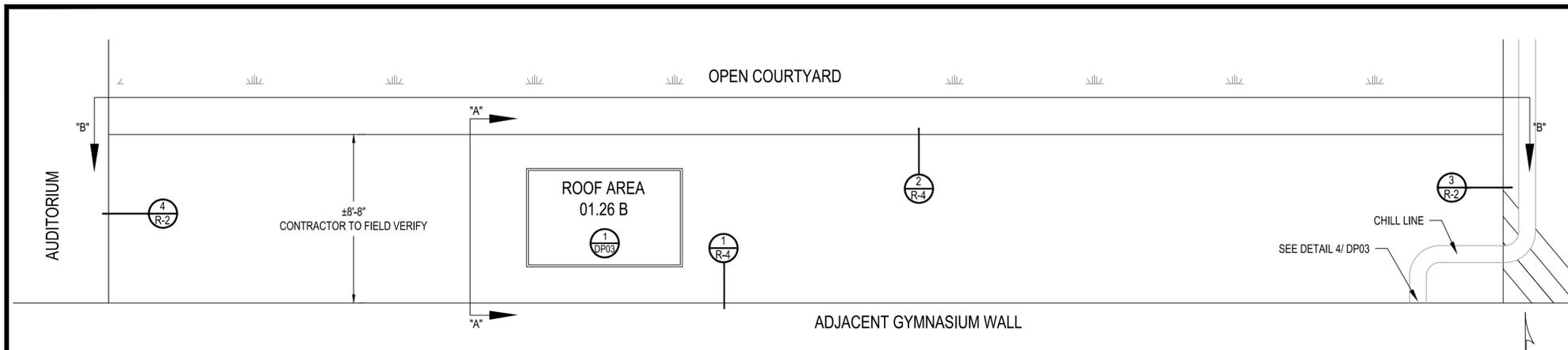
DP02

PAGE NUMBER

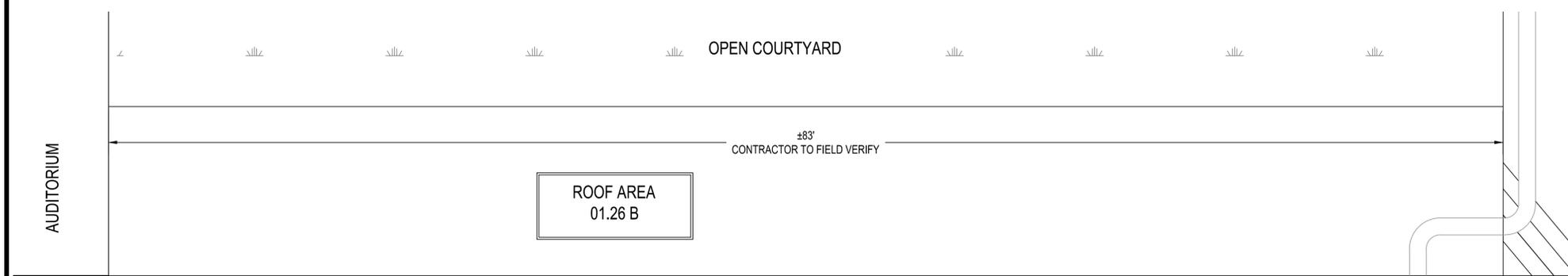


1 DETAIL PLAN
DP02 SCALE: 3/16" = 1'

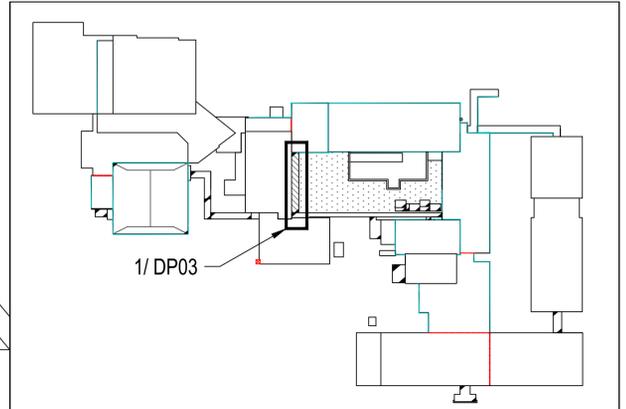
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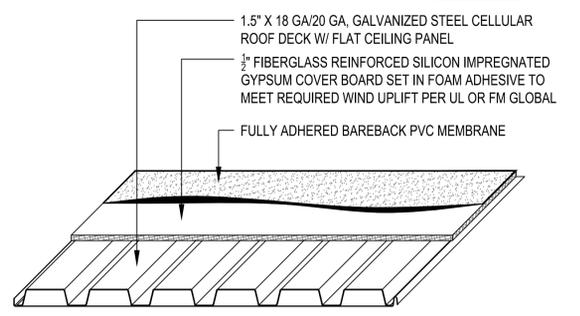
1 CANOPY ROOF DECK PLAN
DP03 SCALE: 1/4" = 1'



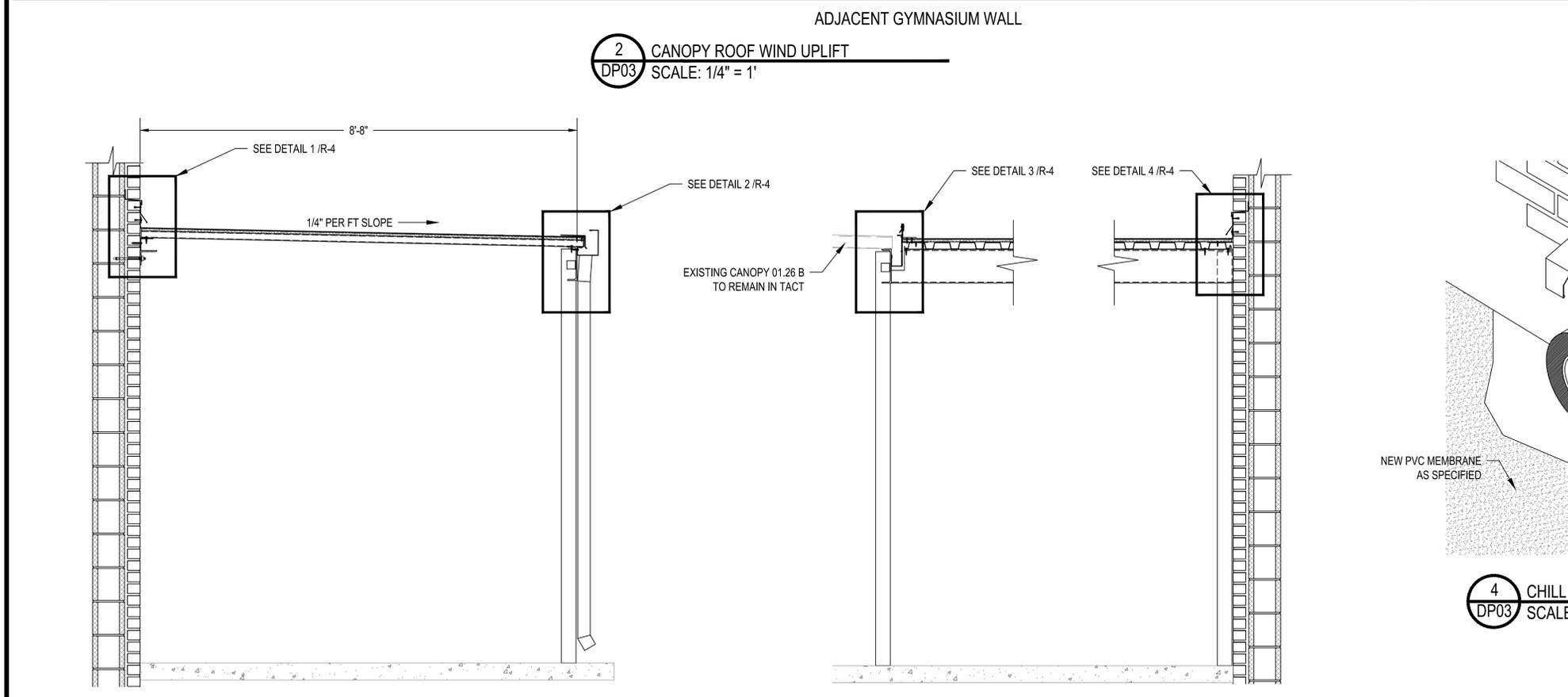
2 CANOPY ROOF WIND UPLIFT
DP03 SCALE: 1/4" = 1'



KEY PLAN

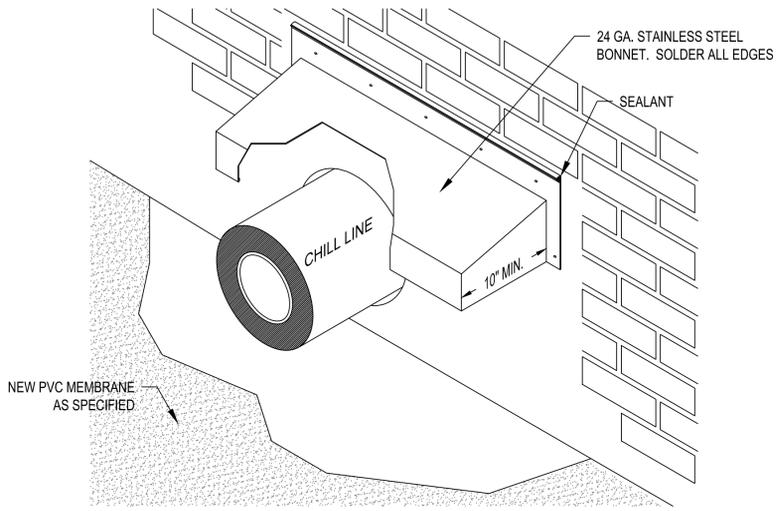


3 CANOPY ROOF WIND UPLIFT
DP03 SCALE: 1-1/2" = 1'



A-A DETAIL PLAN
SCALE: 3/16" = 1'

B-B DETAIL PLAN
SCALE: 3/16" = 1'



4 CHILL LINE PENETRATION HOOD
DP03 SCALE: 1-1/2" = 1'



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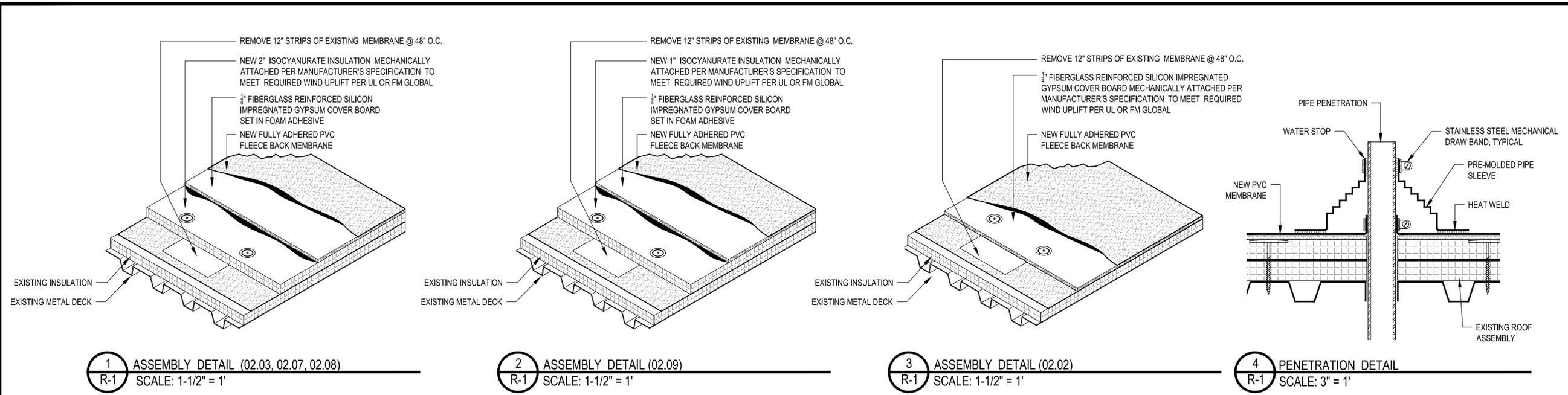
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DETAIL PLAN

DP03

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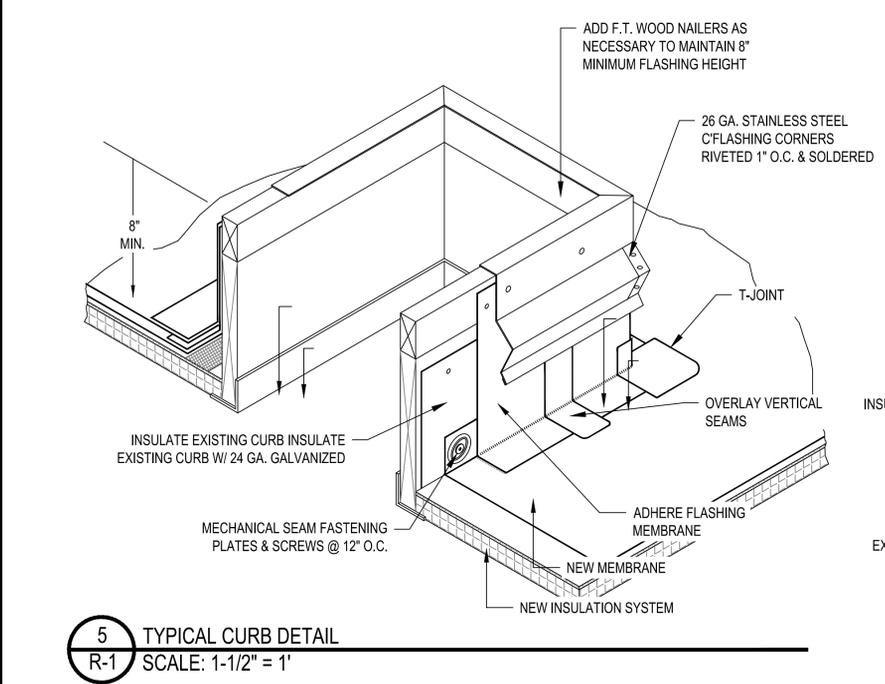


1 ASSEMBLY DETAIL (02.03, 02.07, 02.08)
R-1 SCALE: 1-1/2" = 1'

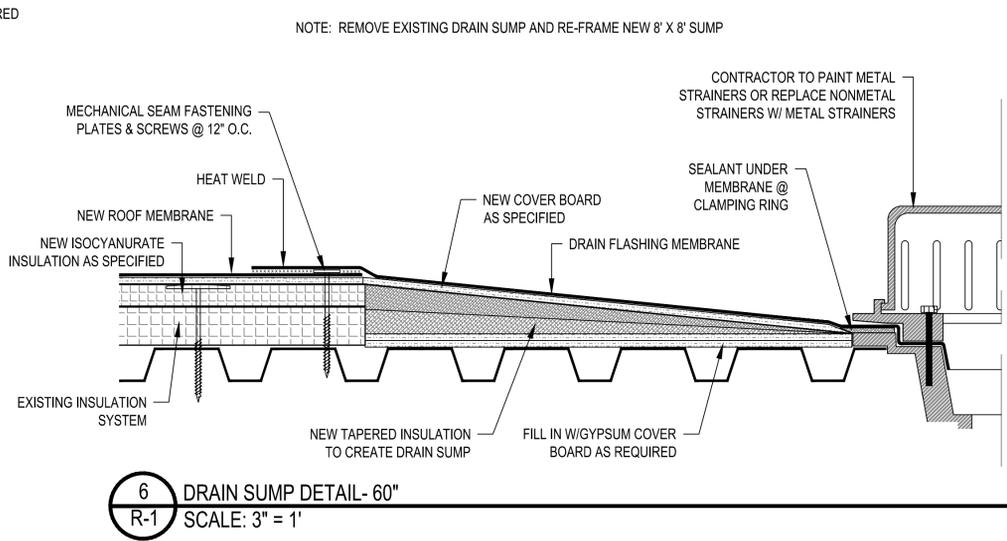
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R-1 SCALE: 1-1/2" = 1'

3 ASSEMBLY DETAIL (02.02)
R-1 SCALE: 1-1/2" = 1'

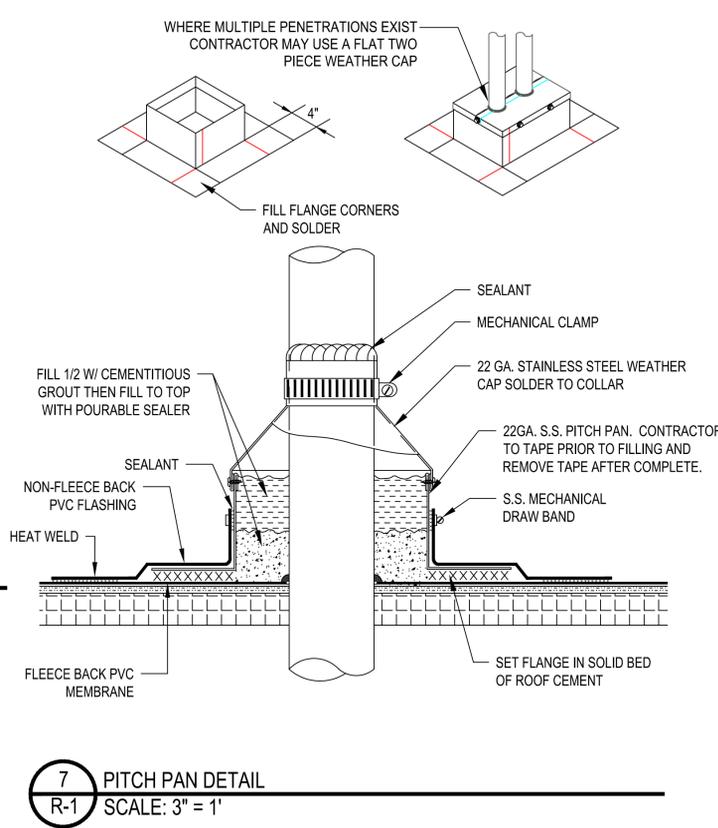
4 PENETRATION DETAIL
R-1 SCALE: 3" = 1'



5 TYPICAL CURB DETAIL
R-1 SCALE: 1-1/2" = 1'



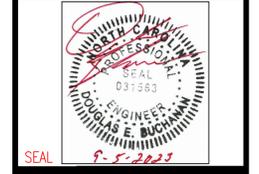
6 DRAIN SUMP DETAIL - 60"
R-1 SCALE: 3" = 1'



7 PITCH PAN DETAIL
R-1 SCALE: 3" = 1'



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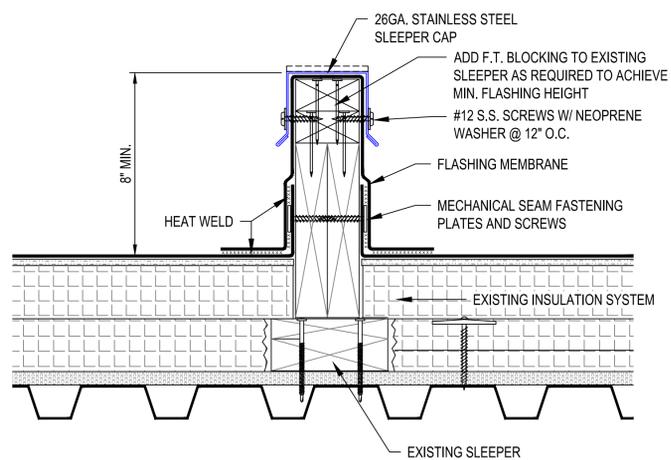
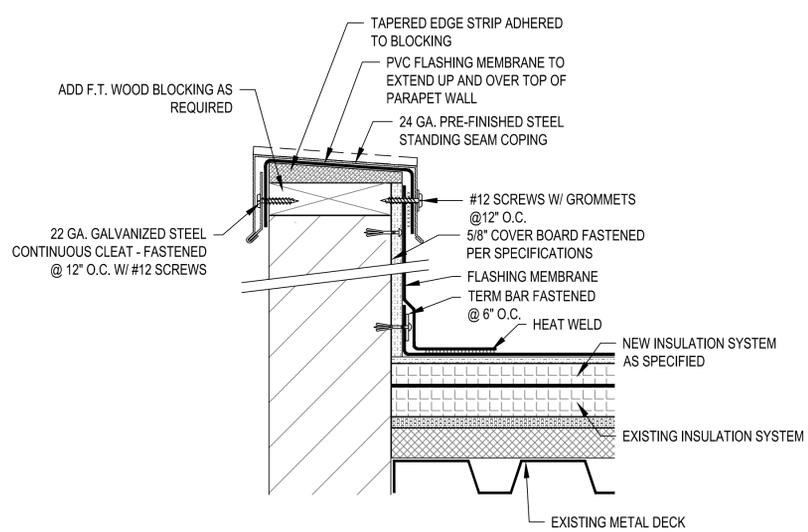
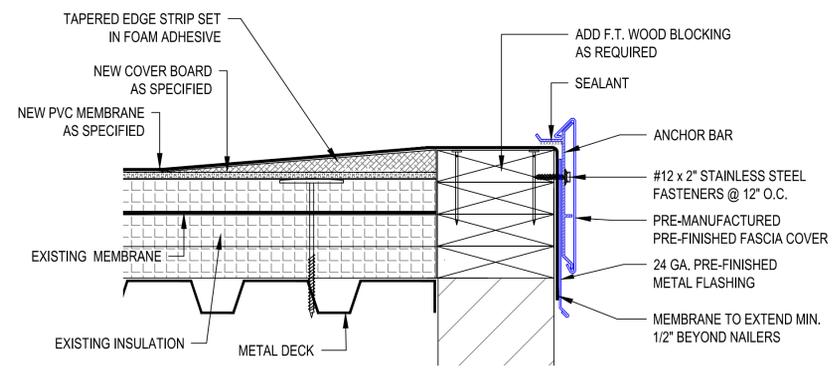
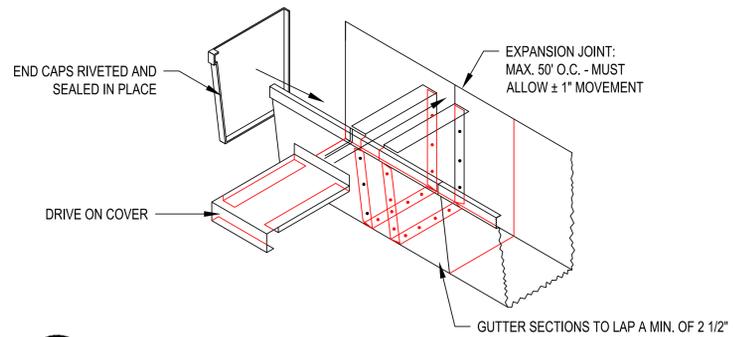
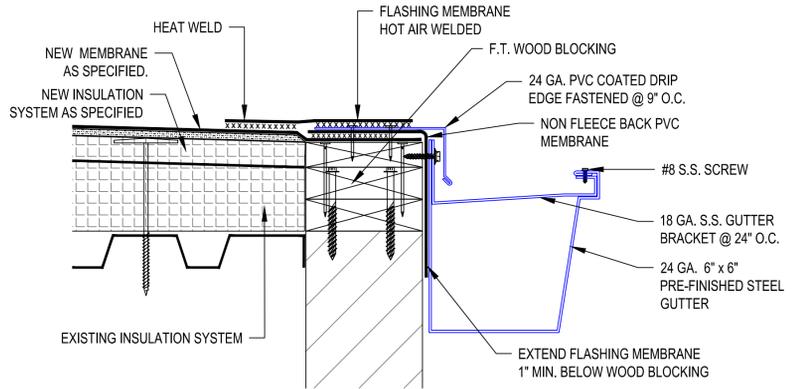
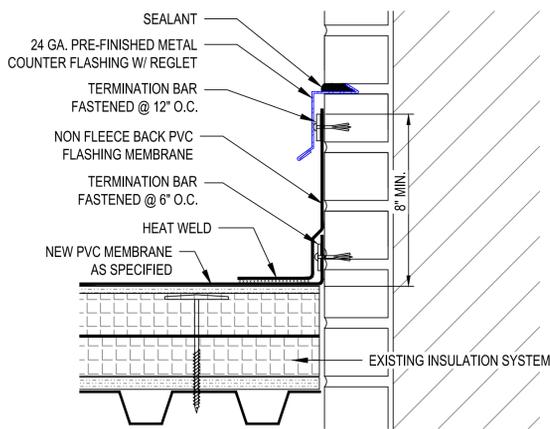
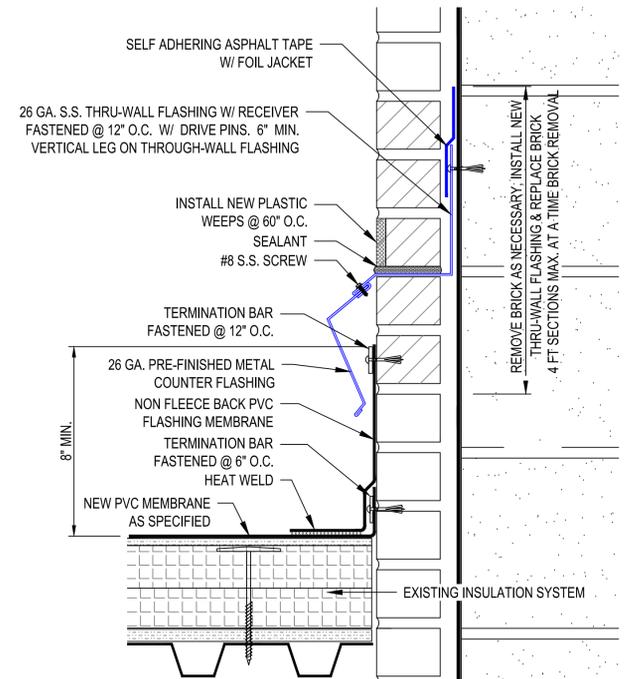
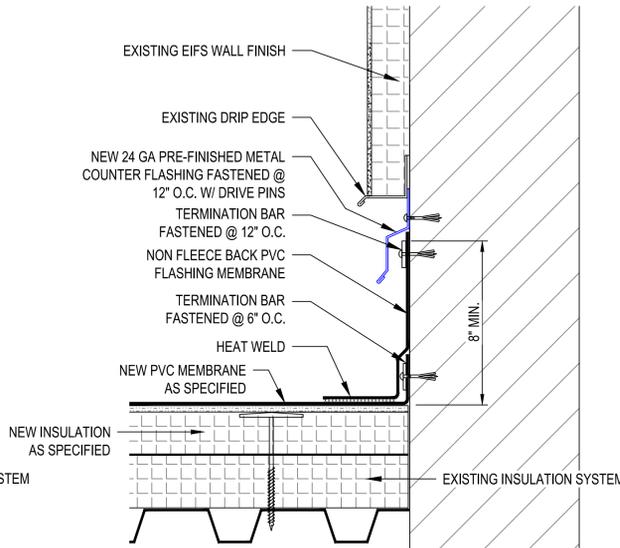
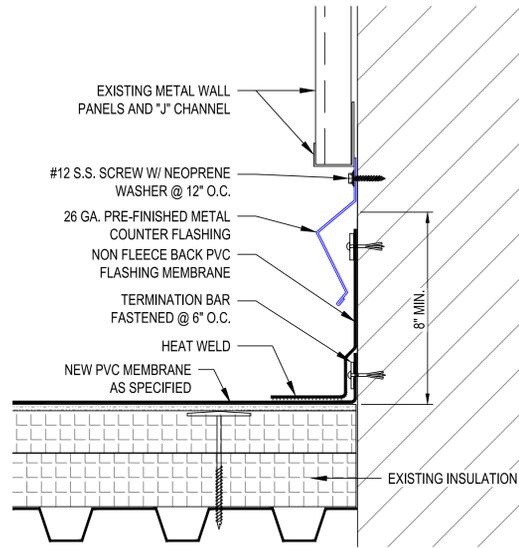
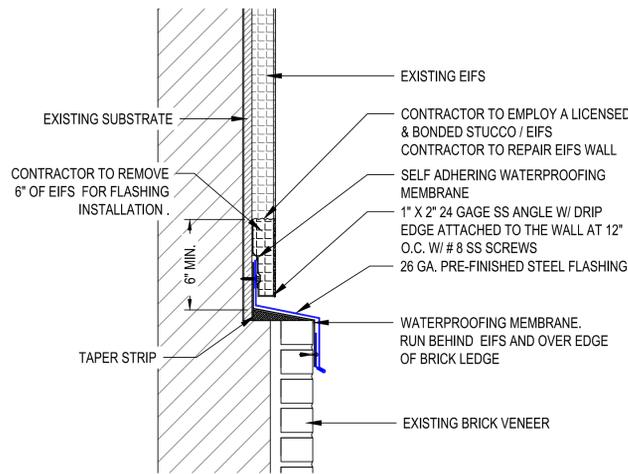
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ROOF DETAILS
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R-1
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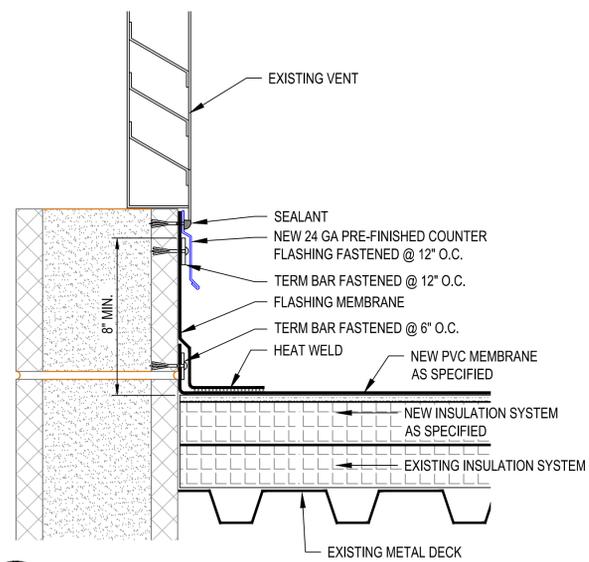
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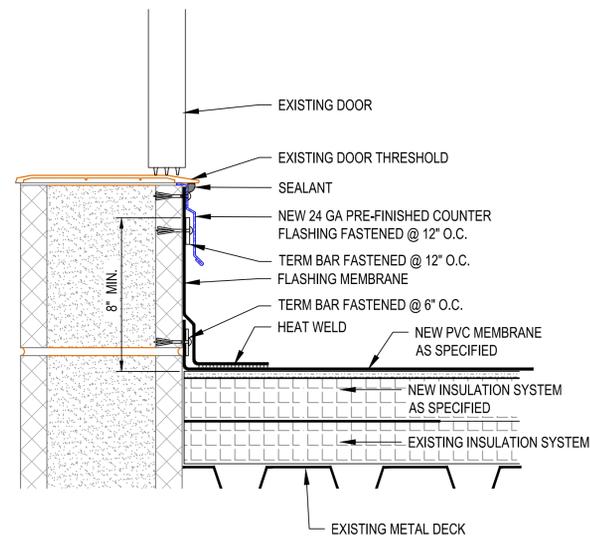
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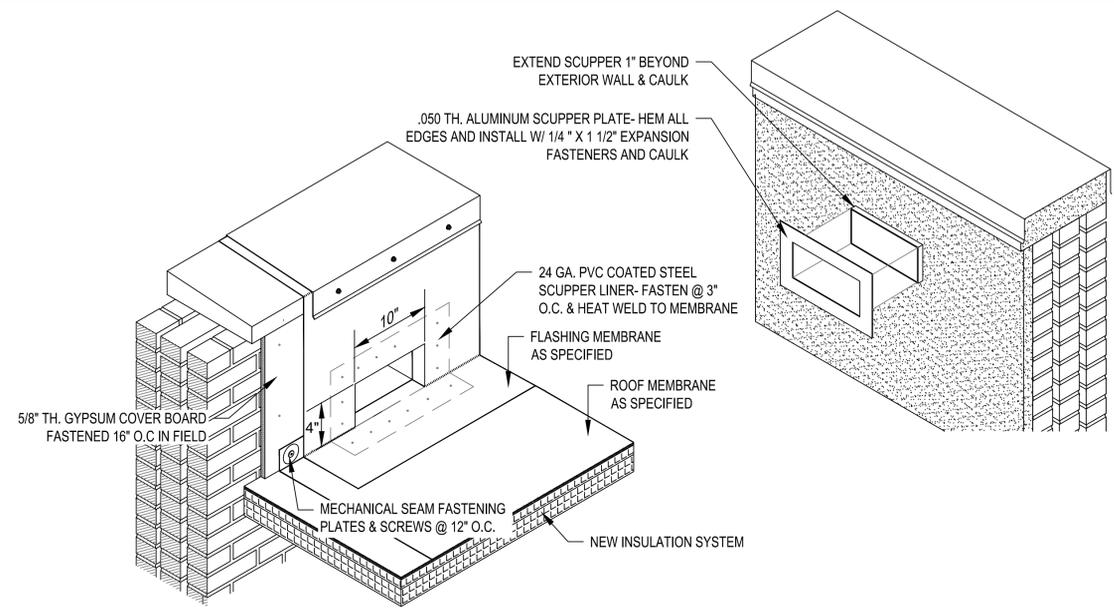
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1 WALL FLASHING @ VENT DETAIL
R-3 SCALE: 3" = 1'

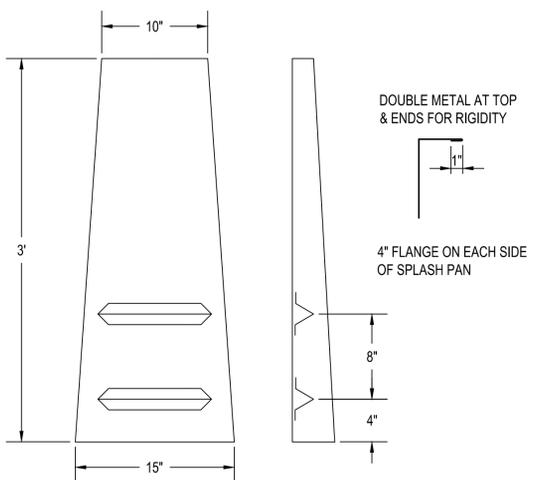


2 WALL FLASHING @ DOOR DETAIL
R-3 SCALE: 3" = 1'

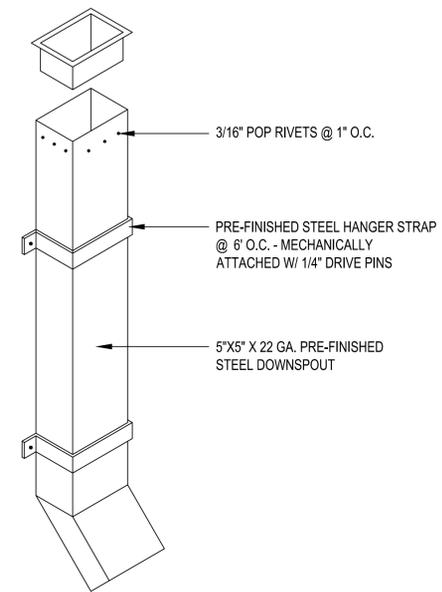


3 TROUGH WALL SCUPPER
R-3 1" = 1'

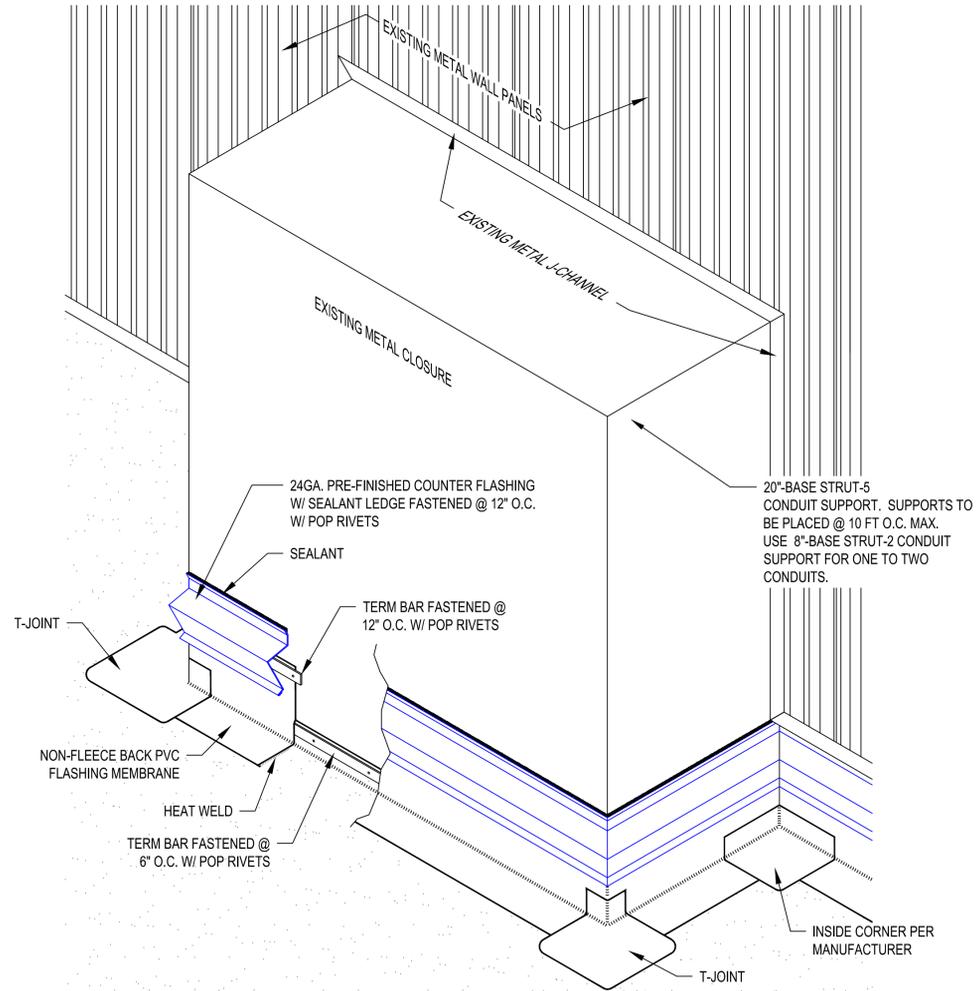
SPLASH PANS TO BE FABRICATED FROM 26 GA. STAINLESS STEEL, AND SET ON WALK PAD EXTENDING 4" PAST PAN IN ALL DIRECTIONS. ADHERE SPLASH PAN TO WALK PAD AND WALK PAD TO ROOF SURFACE. POSITION DIRECTLY UNDER DOWNSPOUT



4 SPLASH PAN DETAIL
R-3 SCALE: 1-1/2" = 1'



5 DOWNSPOUT DETAIL
R-3 SCALE: 1-1/2" = 1'



6 METAL CLOSURE FLASHING DETAIL
R-3 SCALE: 1-1/2" = 1'



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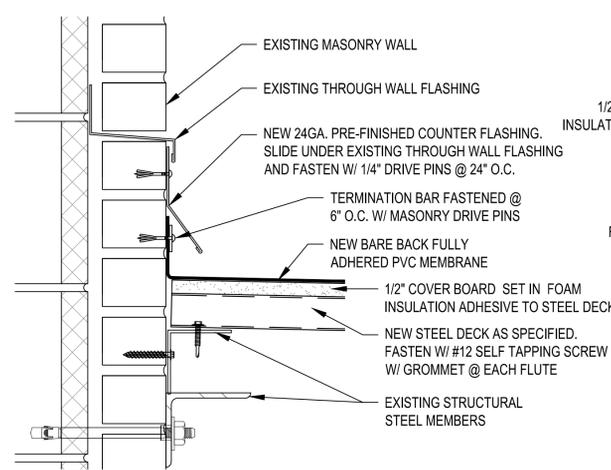
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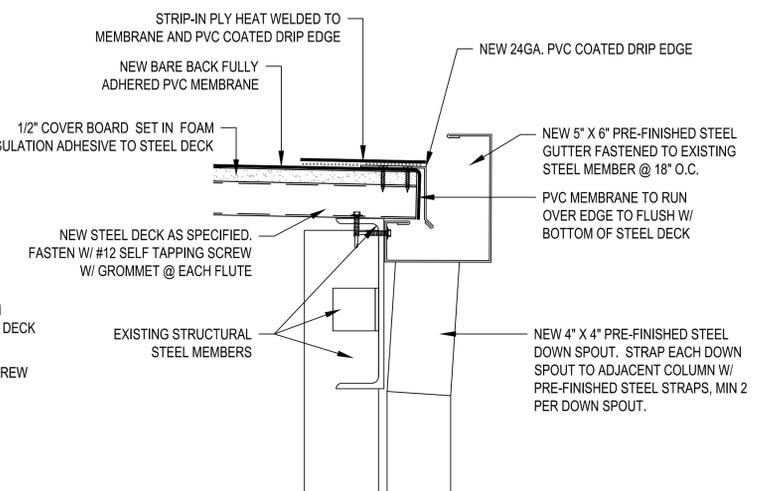
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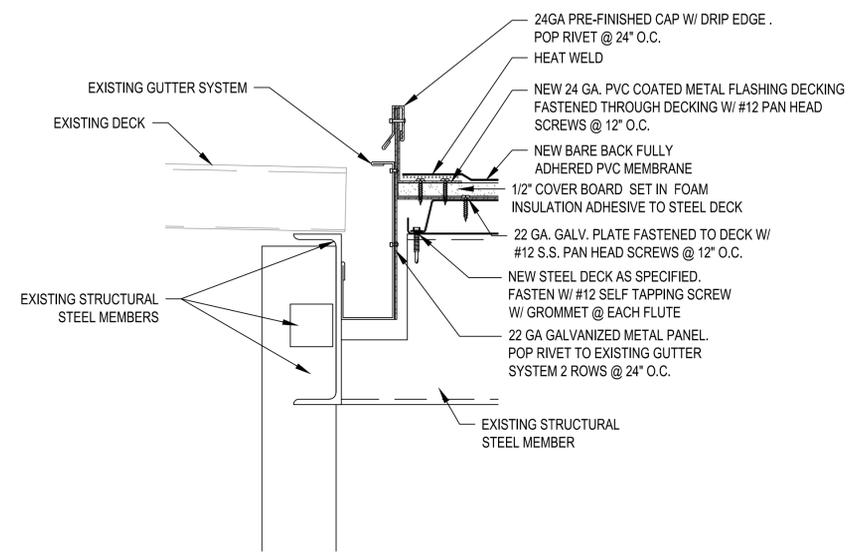
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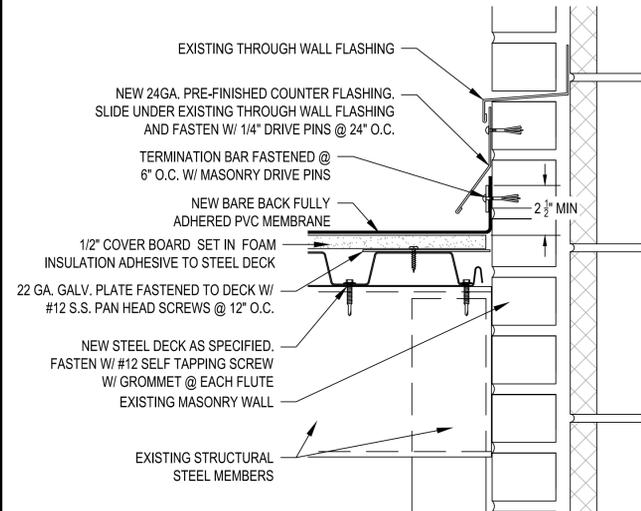
1 SECTION @ GYMNASIUM WALL
R-4 SCALE: 3" = 1'



2 SECTION @ GYMNASIUM WALL
R-4 SCALE: 3" = 1'



3 SECTION @ CANOPY INTERSECTION
R-4 SCALE: 3" = 1'



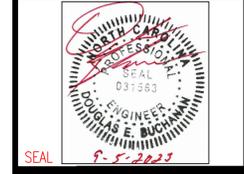
4 SECTION @ WALL OVER AUDITORIUM ENTRANCE
R-4 SCALE: 3" = 1'

NOTE:

1. THE STEEL DECK SHALL BE 1.5" X 18GA/20 GA. GALVANIZED STEEL CELLULAR ROOF DECK W/ FLAT CEILING PANEL, 33 KSI, GALVANIZED ATTACHED TO ANGLE OR MC WITH EITHER A PUDDLE WELD, OR #12 SELF-TAPPING SCREW WITH 5/16 WASHER MEETING ASTM C1513 OR HILTI FASTENER X-ENP-19, OR PNEUTEK FASTENER K64 AT 12" O.C. THE MANUFACTURER SHALL PROVIDE FINAL SPACING BASED ON THEIR MATERIAL AND CONNECTORS BEING USED.
2. THE DECK SHALL BE SOLID ON THE BOTTOM.
3. THE SIDE LAPS SHALL HAVE CONNECTION PER LAP. THE CONNECTIONS CAN EITHER BE ACCOMPLISHED USING #12 SELF TAPPING SCREWS AT 18" O.C. OR SEAM WELDS AT 36" O.C. FROM THE CENTER OF THE PANEL. IN ADDITION, THE EDGE OF THE PANEL, THE LAP SEAMS SHALL BE CONNECTED.
4. SCREWS SHALL BE MADE FROM THE BOTTOM UP, NO THREADS CAN BE VISIBLE BELOW.
5. THE WELD SHALL BE E70 AND PERFORMED BY A WELDER CURRENTLY CERTIFIED BY AMERICAN WELDING D1.3 SOCIETY (AWS). CONTRACTOR SHALL PROVIDE CERTIFICATION TO THE ENGINEER. PUDDLE WELDS SHALL BE A MIN. OF $\frac{5}{16}$ ".



WOLF TRAIL™
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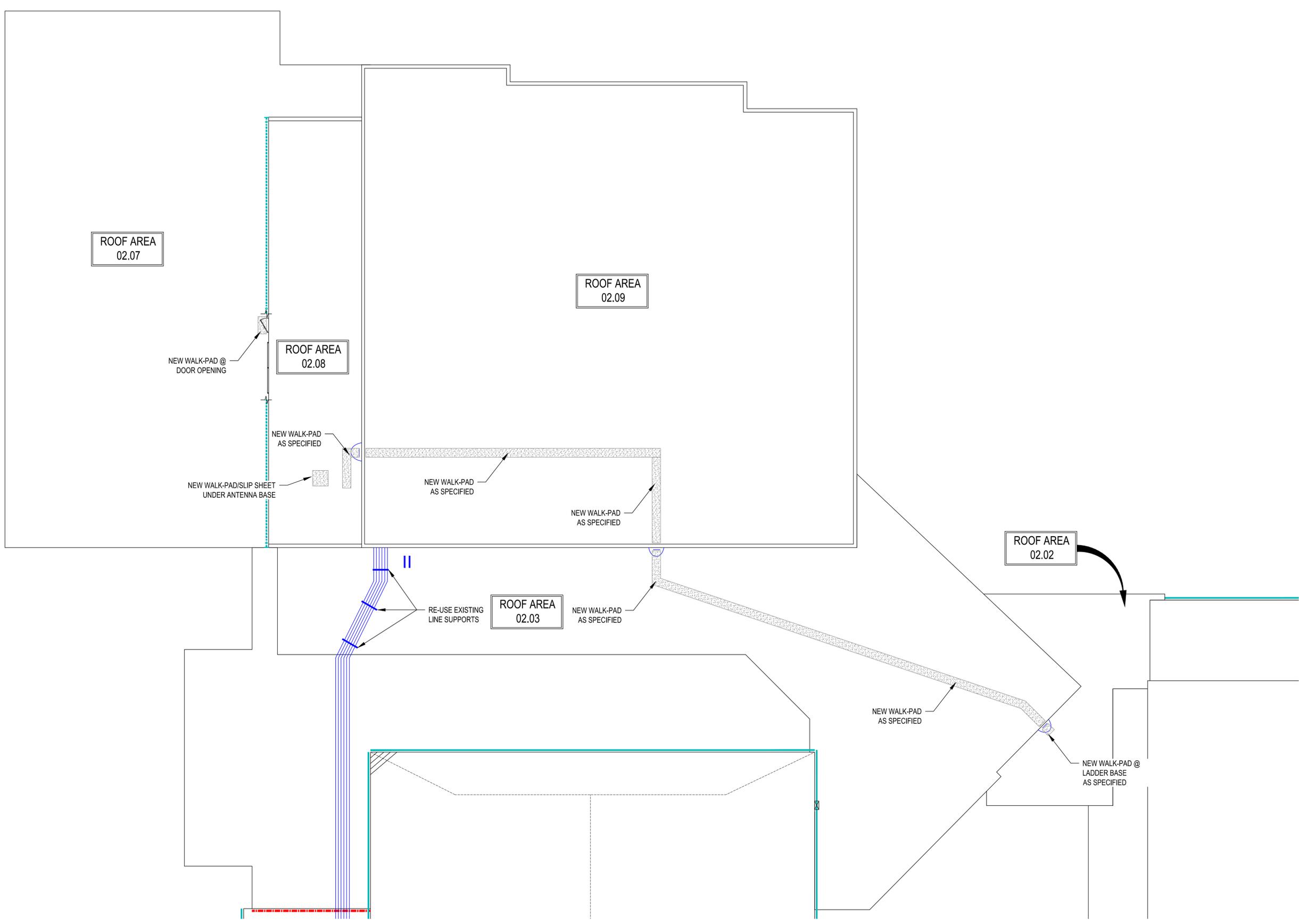
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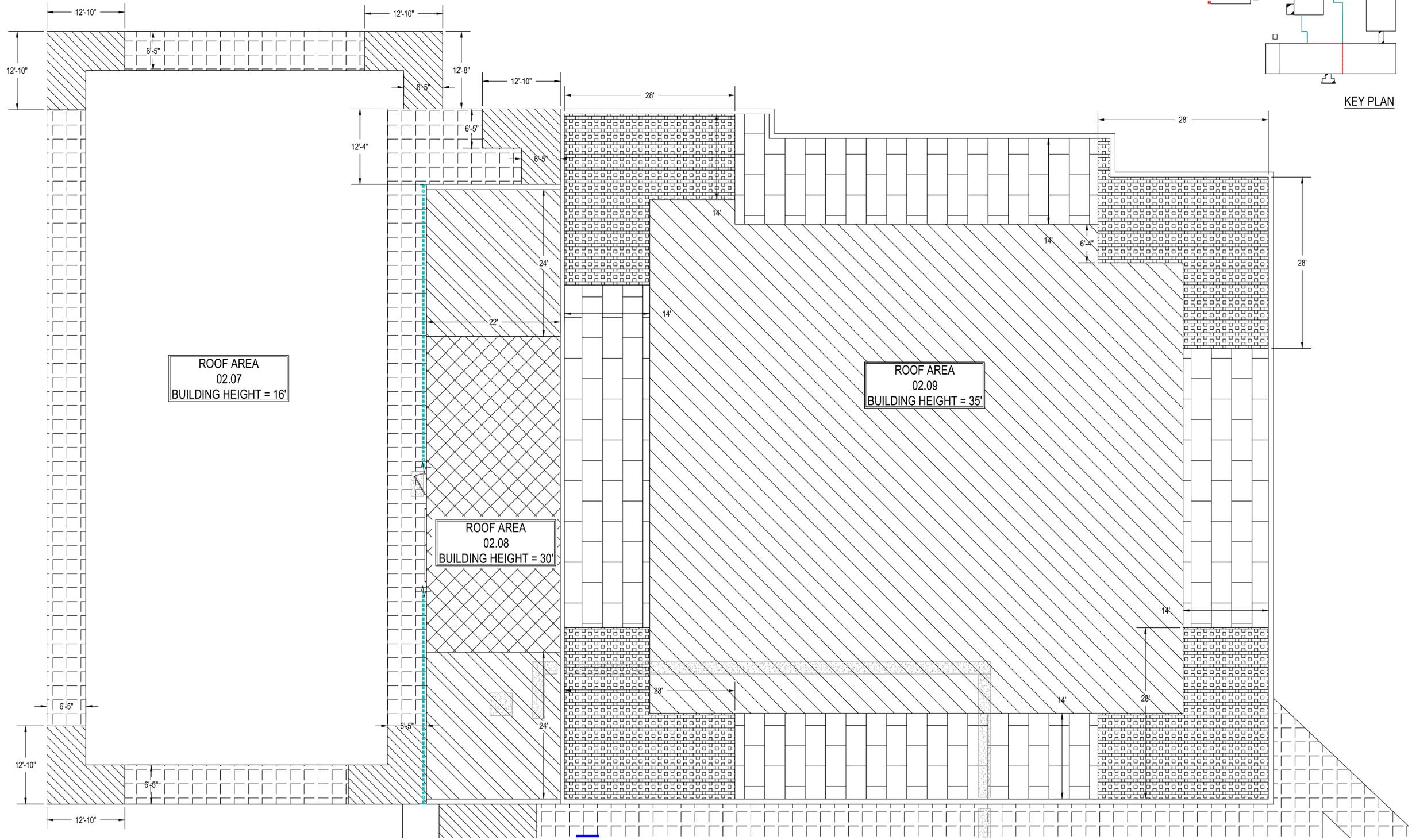
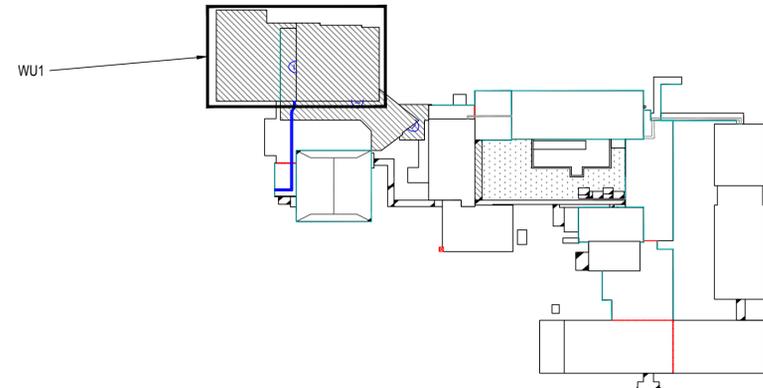
ROOF ACCESSORIES
SHEET TITLE

RA01
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1 ROOF ACCESSORIES PLAN
RA1 SCALE: 1/8" = 1'

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	Zone 1 -29.8 PSF		Zone 2 -46.8 PSF		Zone 3 -63.7 PSF		Zone 1 -34.0 PSF		Zone 2 -53.4 PSF		Zone 3 -72.8 PSF		Zone 1 -35.1 PSF		Zone 2 -55.1 PSF		Zone 3 -75.1 PSF
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ROOF AREA 02.07

ROOF AREA 02.08

ROOF AREA 02.09

1 WIND UPLIFT PLAN
WU1 SCALE: 1/8" = 1'

NOT FOR CONSTRUCTION



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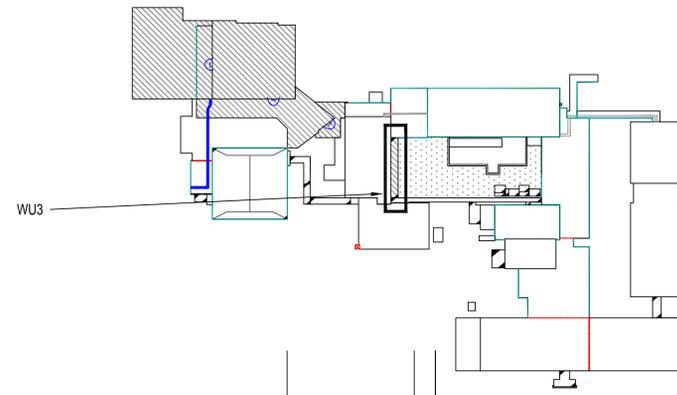
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WIND UPLIFT

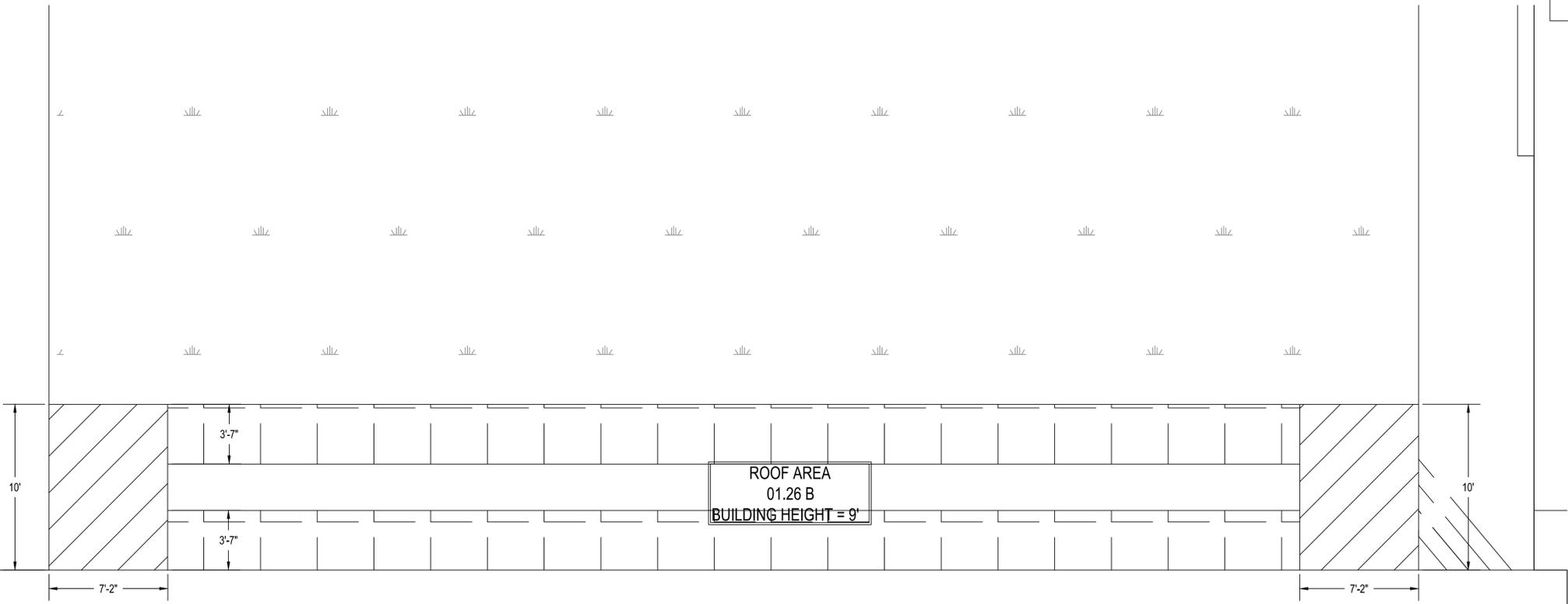
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PAGE NUMBER



KEY PLAN



ROOF AREA
01.26 B
BUILDING HEIGHT = 9'

1 WIND UPLIFT PLAN
WU3 SCALE: 1/4" = 1'

Zone 1 -19.4 PSF
Zone 2 -27.7 PSF
Zone 3 -43.2 PSF



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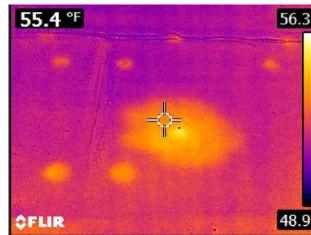
WIND UPLIFT

SHEET TITLE

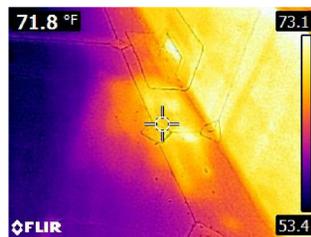
WU2

PAGE NUMBER

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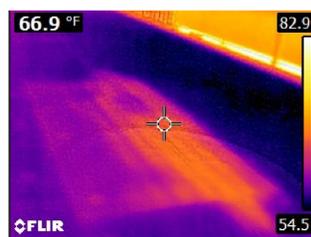
#1 APPROX 10 sq. ft.



#2 APPROX 20 sq. ft.



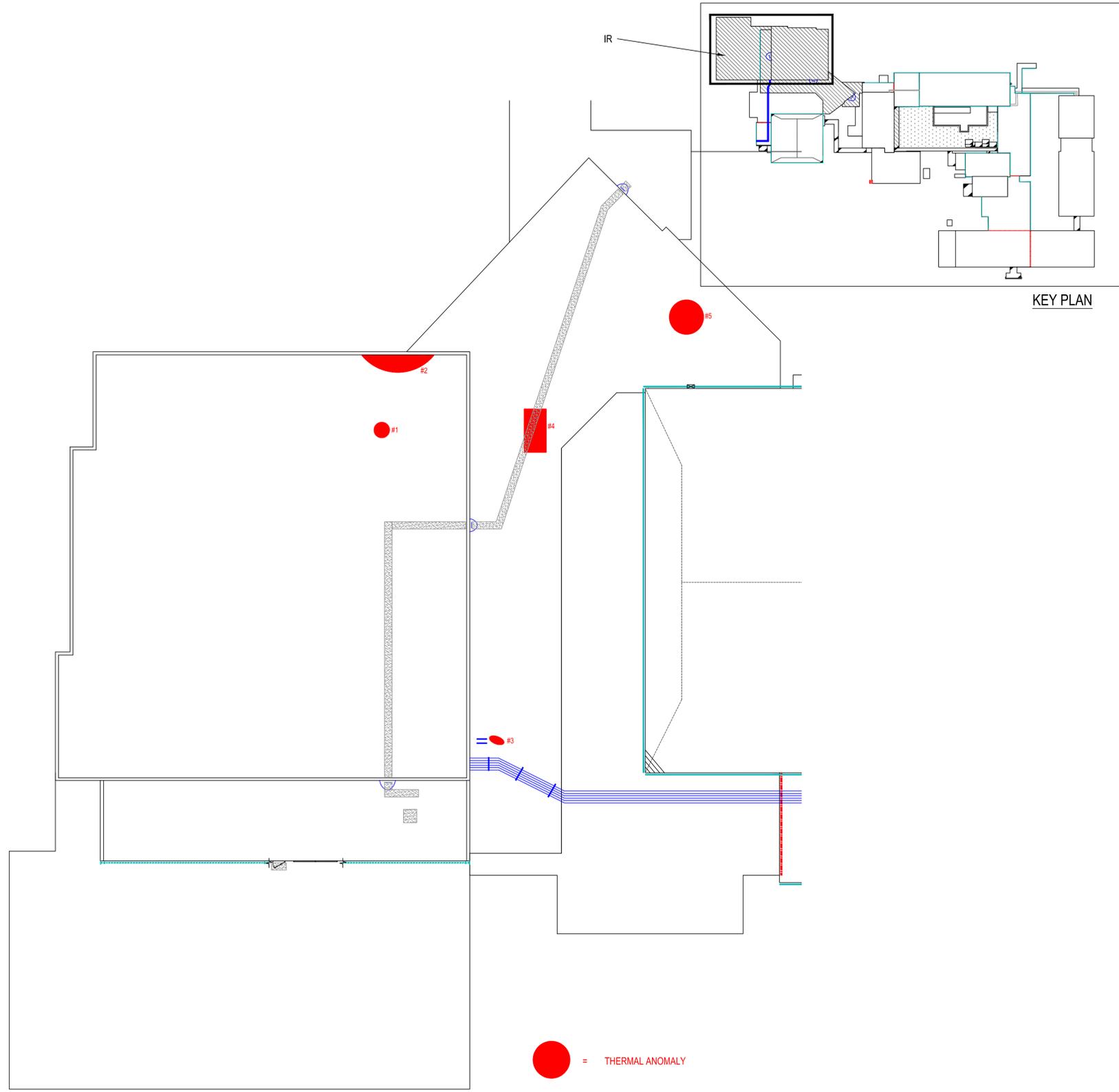
#3 APPROX 40 sq. ft.



#4 APPROX 40 sq. ft.



#5 APPROX 20 sq. ft.



1 INFRARED SURVEY
IR SCALE: 1/16" = 1'



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INFRARED SURVEY

IR

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PAGE NUMBER



January 8, 2024

Mr. Maurice Brown
Construction Project Manager
UCPS Facilities Department
201 Venus Street
Monroe, NC 28112

Re: Addendum #1 – Monroe High School Roof Renovation Project

Please find the following changes to the specifications for the Roof Renovation Project at Monroe High School.

Approved Substitution requests:

- PVC Membrane
 - Soprema Sentinel P150 HFB 60 Mil
- Insulation
 - Atlas AC Foam II GRF Roof Insulation
 - Soprema Sopra-Iso

Disapproved Substitution requests:

- No Johns Manville products will be considered for this project.

Specifications:

- Section 00 41 13 Bid Form
 - Add Base Bid Option #2 for Modified Bitumen roof membrane on all roof areas listed on SOW.
- Add Section 07 52 16.11 Cold Applied Mod Bit. to the specifications.

This change should be considered in assembling your proposal.

Please let me know if you have any comments or questions.

Regards,

Chris Tucker

Chris Tucker | Project Manager
chris@wolftrailengineering.com | 704-562-0791

cc- All Attendees

Attachments:

00 41 13 Bid Form

07 52 16.11 Cold Applied Mod Bit.

Attach to Bid Attach to Bid

00 41 13

BID FORM STIPULATED SUM (SINGLE-PRIME CONTRACT)

PROJECT: 2023-UCPS-R-3-Monroe High School Roof Renovation Project

LOCATION: 1 High School Dr, Monroe, NC 28112

SPECIFICATION DATE: October 2023

CONTRACTOR: _____

ADDRESS: _____

(Telephone w/Area Code) _____

DATE: _____

LICENSE/LIMITS: _____

NC LICENSE NUMBER: _____

INSURANCE CARRIER: _____

PRICE FOR WORK INCLUDED IN THE BID DOCUMENTS AND AS

OUTLINED IN THE SCOPE OF WORK:

BASE BID OF ROOF AREAS: (01.26 Section B, 02.02, 02.03, 02.07, 02.08, 02.09, + contingency)

BASE BID Option #1: (PVC Re-cover) \$ _____

BASE BID Option #2: (Modified Bitumen Re-cover) \$ _____

Having visited the site of proposed Work and checked all dimensions of areas included in the Scope of Work, our composite Lump Sum includes approximately.

AREA OF BASE BID: _____ square feet

TIME TO COMPLETION IN CALENDAR DAYS BASE BID _____

Time to completion may be considered in the award of the Contract.

We understand the requirements of the Specifications and Drawings for the project.

We acknowledge receipt of the following addenda to the Specifications (if none received, so state):

Prebid Meeting Minutes: _____

Addendum #1: _____

Addendum #2: _____

Attach to Bid Attach to Bid

UNIT PRICES:

Unit prices shall be used for adjustments to the Contract at the discretion of the Owner in accordance with the General Conditions of the Contract and the Bid Documents. Unit Prices shall be for Work in place and shall include all costs, taxes, profit, and overhead.

- Attach Unit Pricing Sheet, Section 01 22 00, 2.1 LIST OF UNIT PRICES, to bid.

If additional work is required and is not covered by the Unit Prices, the Contractor shall perform the work at his actual cost plus the overhead and profit percentage given below. Percentages for extra work will be considered in the award of the Contract.

Cost plus _____ % Overhead and Profit

Cost shall be substantiated by certified material invoices and labor records maintained by the Contractor to be submitted to the Owner with his request for payment for additional required/requested Work.

SUB-CONTRACTORS: List all proposed sub-contractors by firm name. If no sub-contractors are anticipated, so state.

General Contractor _____
 Electrical Contractor _____
 Plumbing Contractor _____
 Mechanical Contractor _____

The undersigned has enclosed the following with this Proposal:

- _____ Proposal
- _____ Unit Prices: Section 01 22 00 (Page 2)
- _____ 5% Bid Bond
- _____ MBE Affidavit A or B
- _____ Identification of Minority Business Participation (As required)

CONTRACTOR: _____
ADDRESS: _____
BY: (signature) _____
TITLE: _____
Print Name: _____

This Proposal shall be valid for 60 days from the date of submittal.

SECTION 07 52 16.11
COLD APPLIED MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes thermoplastic membranes for the following applications:
 - 1. Roof Membranes: SBS modified bituminous membrane roofing
 - a. Field Membrane
 - b. Flashing Membrane
- B. Related Sections:
 - 1. Section 06 10 00 "Rough Carpentry" for wood nailers, curbs, and blocking, and for wood-based, structural-use roof deck panels.
 - 2. Section 07 62 00 "Sheet Metal Flashing and Trim" for premanufactured metal copings, roof edge fascia, gravel stops, reglets, roof edge flashings, and counter flashings.

1.3 REFERENCES

- A. References in these specifications to standards, test methods and codes, are implied to mean the latest edition of each such standard adopted. The following is an abbreviated list of associations, institutions, and societies which may be used as references throughout this specification section.
 - 1. ASTM: American Society for Testing and Materials
 - 2. FM: Factory Mutual Engineering and Research
 - 3. NRCA: National Roofing Contractors Association
 - 4. OSHA: Occupational Safety and Health Administration
 - 5. SMACNA: Sheet Metal and Air Conditioning Contractors National Association
 - 6. UL: Underwriters Laboratories

1.4 PREINSTALLATION MEETINGS

- A. Pre-installation Roofing Conference at Jobsite: Hold a meeting with the Owner, Construction Manager, Architect, Roofing Contractor, Roofing Manufacturer's Representative, and other applicable trades to discuss the means and methods related to roofing installation. The Roofing Contractor shall examine the substrate that will receive the specified roofing materials and confirm its suitability for attachment of the specified roofing system.

1.5 ACTION SUBMITTALS

- A. Product Data: For each thermoplastic product indicated.
- B. Product Certificates: For each type of modified bitumen membrane and accessory.
- C. Modified Bitumen Membrane Schedule: Include the following information:
 - 1. Membrane application.
 - 2. Membrane manufacturer and product name.

1.6 INFORMATIONAL SUBMITTALS

- A. Manufacturers Contractor Certification Certificate, manufacturer's literature, and materials list for proposed roof assembly.
- B. MSDS sheets are required for all materials and products to be used during the performance of the work. MSDS sheets are to be submitted with the submittals.
- C. The Contractor shall submit in writing on the form provided, that all materials to be used on the project do not contain asbestos.
- D. System shall be designed to meet a minimum wind uplift rating of 90# per square foot as tested and listed by FM Global or Underwriters Laboratories with corner and perimeter enhancements.
- E. System shall have a class A fire resistance rating per UL.

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: Submit the manufacturer's care and maintenance guide.
- B. Executed Guarantee: Provide the Owner with an executed version of the specified guarantee.

1.8 QUALITY ASSURANCE

- A. The roofing system shall be applied only by a Roofing Applicator authorized by one or more of the membrane manufacturers listed in the product section of the specifications.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Storage: Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing manufacturer.
 - 1. Protect stored liquid material from direct sunlight, heat, open fire, ignition sources, oxidizing agents, strong acids, and strong alkalis.
 - 2. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protection: Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Comply with the insulation manufacturer's written instructions for handling, storing, and protecting materials during installation.
- D. Handling: Handle and place roofing materials and equipment in a manner to avoid permanent deflection of deck.

1.10 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing to be installed in accordance with manufacturer's written instructions and warranty requirements.
- B. Membrane Protection: Provide protection against staining and mechanical damage for newly applied roofing and adjacent surfaces throughout this project.
- C. Debris Removal: Remove all debris daily from the project site and take to a legal dumping area authorized to receive such materials.
- D. Site Condition: Complete, to the owner's satisfaction, all job site clean-up including building interior, exterior and landscaping where affected by the construction.
- E. Torch Safety: Crew members handling torches shall be trained by an Authorized Certified Roofing Torch Applicator (CERTA) Trainer, be certified according to CERTA torch safety guidelines as published by the National Roofing Contractors Association (NRCA), and follow torch safety practices as required by the contractor's insurance carrier. Designate one person on each crew to perform a daily fire watch. The designated crew member shall watch for fires or smoldering materials on all areas during roof construction activity, and for the minimum period required by CERTA guidelines after roofing material application has been suspended for the day.

1.11 GUARANTEE

- A. Manufacturer's Guarantee: Provides that the Manufacturer will repair leaks through the covered roofing materials due to material or workmanship defects, subject to certain exclusions, during the specified time period. Refer to guarantee for complete coverage and restrictions.
 - 1. The Guarantee shall provide coverage for the roofing membrane and base flashings. The Guarantee shall be non-prorated and contain no deductibles or limitations on coverage amount.
 - 2. Guarantee Period: 20 years from date of Substantial Completion.
- B. Special Project Warranty: Submit roofing contractor's warranty signed by the Installer, including all components of the roofing and insulation system for the following warranty period:
 - 1. Warranty Period: 2 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: A roof system by the following manufacturer is approved for application.
1. Siplast, Inc.
 2. Tremco
 3. Derbigum

2.2 ROOFING MEMBRANE SHEET MATERIALS

- A. Base Ply: An ASTM D6163, Type I, Grade S homogenous membrane with a glass-fiber reinforcing mat impregnated/saturated and coated each side with SBS modified bitumen blend and dusted with a fine silica parting agent on both sides. The cross sectional area of the sheet material shall contain no oxidized or non-SBS modified bitumen. The base ply shall possess waterproofing capability, such that a phased roof application can be achieved for prolonged periods of time without detriment to the watertight integrity of the entire roof system and possess the following physical/mechanical properties.

1. Thickness (avg): 91 mils (2.3 mm) (ASTM D5147)
2. Thickness (min): 87 mils (2.2 mm) (ASTM D5147)
3. Weight (min per 100 ft² of coverage): 62 lb (3.0 kg/m²)
4. Peak filler content in elastomeric blend - 35% by weight
5. Low temperature flexibility @ -15°F (-26°C): PASS (ASTM D5147)
6. Peak Load (avg) @ 73°F (23°C): 30 lbf/inch (5.3 kN/m) (ASTM D5147)
7. Peak Load (avg) @ 0°F (-18°C): 70 lbf/inch (12.3 kN/m) (ASTM D5147)
8. Ultimate Elongation (avg.) @ 73°F (23°C): 50% (ASTM D5147)
9. Compound Stability (max): 0.1% (ASTM D5147)
10. High Temperature Stability (min): 250°F (121°C) (ASTM D5147)

- a. Siplast, Inc. : Paradiene 20
- b. Tremco: POWERply Heavy Duty Base Sheet
- c. Derbigum: Deribase Ultra

- B. Finish Ply: An ASTM D6163, Type I, Grade G homogenous membrane with a glass-fiber reinforcing mat impregnated/saturated and coated each side with SBS modified bitumen blend and dusted with a fine silica parting agent on bottom

surface and a coarse mineral-granule top surfacing. The cross sectional area of the sheet material shall contain no oxidized or non-SBS modified bitumen.

1. Thickness (avg): 130 mils (3.3 mm) (ASTM D5147)
2. Thickness at selvage (coating thickness) (avg): 98 mils (2.5 mm) (ASTM D5147)
3. Thickness at selvage (coating thickness) (min): 94 mils (2.4 mm) (ASTM D5147)
4. Weight (min per 100 ft² of coverage): 90 lb (4.4 kg/m²)
5. Peak filler content in elastomeric blend: 35% by weight
6. Low temperature flexibility @ -15° F (-26° C): PASS (ASTM D5147)
7. Peak Load (avg) @ 73°F (23°C): 30 lbf/inch (5.3 kN/m) (ASTM D5147)
8. Peak Load (avg) @ 0°F (-18°C): 75 lbf/inch (13.2 kN/m) (ASTM D5147)
9. Ultimate Elongation (avg.) @ 73°F (23°C): 55% (ASTM D5147)
10. Compound Stability (max): 0.1% (ASTM D5147)
11. High Temperature Stability (min): 250°F (121° C) (ASTM D5147)
12. Granule Embedment (max loss): 2.0 grams per sample (ASTM D5147)
13. Approvals: UL Class listed, FM Approved (products shall bear seals of approval)
14. Reinforcement: fiberglass mat or other meeting the performance and Compound stability criteria
15. Surfacing: ceramic granules
 - a. Siplast, Inc. : Paradiene 30 FR
 - b. Tremco: POWERply Standard FR
 - c. Derbigum: Derbicolor GPFR

2.3 BASE FLASHING SHEET MATERIALS

- A. Flashing Reinforcing Ply and Cant Backer: An ASTM D6163, Type I, Grade S homogenous membrane with a glass-fiber reinforcing mat impregnated/saturated and coated each side with SBS modified bitumen blend with a factory applied polymer modified asphalt self-adhesive on the back surface of the sheet to provide full adhesion to the total surface area of the substrate. The back side of the base ply shall be surfaced with a removable film.
 - a. Siplast, Inc. : Paradiene 20
 - b. Tremco: POWERply Heavy Duty Base Sheet
 - c. Derbigum: Deribase Ultra
- B. Granule-Surfaced Flashing Sheet: An ASTM D6162, Type II Grade G homogenous membrane with a fiberglass scrim/polyester reinforcing mat composite impregnated/saturated and coated each side with the SBS modified bitumen blend and dusted with a fine silica parting agent on bottom surface and a coarse mineral-granule top surfacing. The cross sectional area of the sheet material shall contain no oxidized or non-SBS modified bitumen.

- a. Siplast, Inc. : Paradiene 30 FR / Parafor 30
- b. Tremco: POWERply Standard FR
- c. Derbigum: Derbicolor GPFR

2.4 PRIMERS

- A. Asphalt Primer: Primer shall meet ASTM D41 criteria.
 1. Coordinate primers with selected manufacturer's recommendation
- B. Low VOC Asphalt Primer: Primer shall meet ASTM D41 criteria and South Coast Air Quality District and Ozone Transport Commission requirements.
- C. Primer for Self-Adhesive Membranes: Primer for self-adhesive membranes shall be a single component, water-based resinous primer formulated to condition masonry, wood, plywood, concrete, asphaltic, and gypsum surfaces to facilitate adhesion of self-adhesive membranes.

2.5 AUXILIARY ROOFING MATERIALS

- A. Roofing Asphalt: ASTM D312, Type [III or IV].
 1. Siplast, PA-1021, PA-828
 2. Tremco, ELS
 3. Derbigum, Derbimastic S
- B. Cold-Applied Asphalt Adhesive: An asphalt, solvent blend conforming to ASTM D4479, Type II requirements.
- C. Membrane Adhesive: A single-component, moisture curing, low-odor adhesive designed for application of the specified roof membrane system.
- D. Asphalt Roofing Cement: An asphalt cutback mastic, reinforced with non-asbestos fibers, used as a base for setting metal flanges conforming to ASTM D4586 Type II requirements.
- E. Flashing Cement: A slump resistant, asphalt cutback flashing adhesive, reinforced with non-asbestos fibers, conforming to ASTM D4586 Type II requirements.
- F. Flashing Cement: A single-component, moisture curing, low-odor adhesive formulated in a grade for application of flashing materials.
- G. Sealant: A moisture-curing, self-leveling elastomeric sealant designed for roofing applications.
 1. All sealants and pitch pocket fillers must be coordinated with membrane manufacturer to meet requirements for specified NDL warranty.

- H. Ceramic Granules: No. 11 grade specification ceramic granules of color scheme matching the granule surfacing of the finish ply.

2.6 SUBSTRATE BOARD

- A. Substrate Board: A panel composed of a gypsum based, non-structural water resistant core material integrally bonded with fiberglass mats on both sides. Provide panels having a nominal thickness of five eighths inch (5/8"). Acceptable types are as follows:
 - 1. Dens Deck as manufactured by Georgia Pacific or equal.
 - 2. Securock as manufactured by USG
 - 3. Dexcell as manufactured by National Gypsum Corporation and by Georgia Pacific Corporation

2.7 ROOF INSULATION

- A. General: Insulation shall be approved in writing by the insulation manufacturer for intended use and for use with the specified roof assembly. Maintain a maximum panel size of 4 feet by 4 feet where polyisocyanurate / fiberboard insulation is specified to be installed in insulation adhesive or hot asphalt. Install only as much insulation as can be made watertight during the same work day.
- B. Polyisocyanurate Board Insulation (organic paper facer): A closed cell, rigid polyisocyanurate foam core material, integrally laminated between glass fiber reinforced organic facers, and meeting the criteria established by ASTM C1289, Type II, Class 1, Grade 2. Panels shall have a nominal thickness of one and on-half inches. Acceptable types are as follows:
 - 1. Sarnafil Sarnatherm
 - 2. Fibertite FTR Value
 - 3. Tremco Trisotech
 - 4. Carlisle Secure Shield
 - 5. Siplast Paratherm
 - 6. Duro-Guard polyisocyanurate

2.8 INSULATION COVER PANEL

- A. Gypsum Sheathing Panel: A panel composed of a gypsum based, non-structural water resistant core material integrally bonded with fiberglass mats on both sides having a nominal thickness of one-quarter inch (1/4"). The panel surface shall be factory primed with a non-asphaltic primer. Acceptable types are as follows:
 - 4. 1/4" Dens Deck Prime as manufactured by Georgia Pacific or equal.

5. ¼" Securock as manufactured by USG
6. ¼" Dexcell as manufactured by National Gypsum C.

2.9 INSULATION ACCESSORIES

- A. Insulation Fasteners: The insulation fasteners shall provide attachment required to meet the specified uplift performance and to restrain the insulation panels against the potential for ridging.
- B. Threaded Fasteners-All threaded fasteners used to secure the insulation, roof system or accessory components shall be approved by the membrane manufacturer. Contractor's submittal shall include complete listing of fasteners to be used for this installation.
- C. Insulation Adhesive:
 1. Membrane Adhesive:
All membrane adhesives must be coordinated with membrane manufacturer to meet requirements for specified NDL warranty.
 2. Insulation Board Adhesive
All insulation board adhesives must be coordinated with membrane manufacturer to meet requirements for specified NDL warranty.
- D. Insulation Cant Strips: A cant strip composed of expanded volcanic minerals combined with waterproofing binders, meeting ASTM C728 criteria. The top surface shall be pre-treated with an asphalt based coating. The face of the cant shall have a nominal 4 inch dimension.
- E. Tapered Edge Strips: A tapered panel composed of expanded volcanic minerals combined with waterproofing binders. The top surface shall be pre-treated with an asphalt based coating. The panels shall have a dimension sufficient to provide for a smooth transition and provide proper support for the membrane layer or subsequent layer of insulation when there are transitions of 1/4 inch or greater.

2.10 WALKWAYS

- A. Walktread: A granule-surfaced polymer modified bitumen sheet material reinforced with a prefabricated, puncture resistant polyester core, having a thickness of 0.217 in (5.5 mm) and a width of 30 inches (76.2 cm).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Substrate Qualification: The installing contractor shall examine all substrates where the specified roofing and flashing system will be applied and confirm their suitability to receive the specified roofing materials.

3.2 PREPARATION

- A. Sweep or vacuum all surfaces, removing all loose aggregate and foreign substances prior to commencement of roofing.
- B. Remove all of the following existing conditions:
 - 1. Surface gravel
 - 2. Roof membrane
 - 3. Insulation
 - 4. Base flashings
 - 5. Edge metal
 - 6. Flanged metal flashings
 - 7. Cants
 - 8. Walkways
 - 9. Nonfunctional penetrations/curbs
 - 10. Drain assemblies
 - 11. Vapor retarder
 - 12. Metal trim, counter flashing
- C. Primer for Self-Adhesive Flashing Reinforcing Ply: Apply the specified tacky primer by roller or spray in an even film. Refer to the manufacturer's literature for the approved rate of application over various substrate types. Allow the primer to dry until it leaves a slightly sticky surface without transfer when touched. Cutting or alteration of the primer is not permitted.
- D. Asphaltic Primer: Prime metal and concrete and masonry surfaces with a uniform coating of the specified asphalt primer according to the manufacturer's published application rate. Cutting or alteration of the primer is not permitted.

3.3 INSTALLATION OF ROOFING, GENERAL GUIDLEINES

- A. Adhesive Application: Apply membrane cold adhesive by roller, squeegee or spray unit in a smooth, even, continuous layer without breaks or voids. Utilize an application rate for each ply as published by the roof membrane manufacturer. Double the adhesive application rate at the end laps of granule surfaced sheets. Where solvent-based adhesive is applied, refer to the manufacturer's inter-ply

flashing detail at the locations that are to receive the specified catalyzed acrylic resin primer/flashing system. Cutting or alteration of the adhesive is not permitted.

- B. General Appearance: Ensure that the finished roofing application has an aesthetically pleasing overall appearance and is acceptable to the Owner.

3.4 INSTALLATION OF SUBSTRATE BOARD

- A. Install substrate panels with end joints offset and edges in moderate contact in accordance with the panel manufacturer's requirements. Install only as many panels as can be made watertight within the same workday.

3.5 INSTALLATION OF INSULATION AND COVERBOARD

- A. Install insulation panels with end joints offset with edges in moderate contact in accordance with the insulation manufacturer's requirements. Where insulation is installed in two or more layers, stagger joints between layers. Maintain a maximum panel size of 4 feet by 4 feet for polyisocyanurate / fiberboard insulation applied in insulation adhesive or hot asphalt. Install only as much insulation as can be made watertight within the same work day.
- B. Crickets: Construct crickets of tapered insulation panels in a layout as indicated on the roof plan.
- C. Tapered Edge at Transitions: Field-cut, shape and install tapered edge strip at transitions of 1/4 inch or greater between substrate components to provide a smooth transition and proper support for the subsequent insulation layer or membrane/flashing system components.

3.6 APPLICATION OF BITUMINOUS ROOFING MEMBRANE

- A. Apply all layers of roofing with side laps running perpendicular to the direction of the slope. Exert sufficient pressure on the roll during application to ensure prevention of air pockets, wrinkles, creases or fishmouths. Refer to the manufacturer's guidelines for maximum sheet lengths and special fastening of the head laps where the roof deck slope exceeds 1/2 inch per foot.
- B. Fully bond the base ply to the prepared substrate, utilizing minimum 3 inch side and end laps. Apply each sheet directly behind the cold adhesive applicator. Cut a dog ear angle at the end laps on overlapping selvage edges. Using a clean trowel, apply top pressure to top seal T-laps immediately following sheet application. Stagger end laps a minimum of 3 feet.
- C. Fully bond the finish ply to the base ply, utilizing minimum 3 inch side and end laps. Apply each sheet directly behind the cold adhesive applicator. Stagger end laps of the finish ply a minimum 3 feet. Cut a dog ear angle at the end laps on overlapping

selvage edges. Using a clean trowel, apply top pressure to top seal T-laps immediately following sheet application. Stagger side laps of the finish ply a minimum 12 inches from side laps in the underlying base ply. Stagger end laps of the finish ply a minimum 3 feet from end laps in the underlying base ply.

3.7 APPLICATION OF FLASHING AND STRIPPING

- A. Modified Bitumen Flashing System: Apply the specified base flashing materials in accordance with the manufacturer's standard details. Notify the design team immediately of any flashing heights below 8 inches. For torch applied base flashings, apply a 12-inch self-adhesive cant backing sheet extending 6 inches onto the field of the roof area and a minimum of 6 inches up the vertical surface utilizing minimum 3 inch laps. Set the non-combustible cant into place dry prior to installation of the roof membrane base ply and subsequent flashing system. Flash walls and curbs using the reinforcing sheet and flashing membrane. Exert pressure on the flashing sheet during application to ensure complete contact with the vertical/horizontal surfaces, preventing air pockets. Check and seal all loose laps and edges. Nail the top edge of the flashing on 9 inch centers. (See the manufacturer's schematic for visual interpretation).
- B. Liquid Flashing System: Install the specified liquid-applied flashing system in accordance with the membrane system manufacturer's printed installer's guidelines and other applicable written recommendations as provided by the manufacturer.

3.8 APPLICATION OF SEALANT

- A. Apply a smooth continuous bead of the specified sealant at the exposed finish ply edge transition to metal flashings incorporated into the roof system.

3.9 APPLICATION OF WALKTREAD

- A. Cut the specified walktread into maximum 5 foot lengths and allow to relax until flat. Adhere the sheet using the specified plastic cement. Apply the specified cement in a 3/8 inch thickness to the back of the product in 5 inch by 5 inch spots in accordance with the pattern as supplied by the walktread manufacturer. Walk-in each sheet after application to ensure proper adhesion. Use a minimum spacing of 2 inches between sheets to allow for proper drainage.

3.10 FIELD QUALITY CONTROL

- A. Notify the manufacturer of job completion in order to schedule a final inspection date. Hold a meeting at the completion of the project, attended by all parties that were present at the pre-job conference. A punch list of items required for completion shall be compiled by the manufacturer's representative. Complete, sign, and send the punch list form to the manufacturer's headquarters.

- B. Leave all areas around job site free of debris, roofing materials, equipment and related items after completion of job.
- C. Complete all post installation procedures and meet the manufacturer's requirements for issuance of the specified guarantee.

END OF SECTION 07 52 16



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NC P-1817 | SC 5872

January 9, 2024

Mr. Maurice Brown
Construction Project Manager
UCPS Facilities Department
201 Venus Street
Monroe, NC 28112

Re: Addendum #2 – Monroe High School Roof Renovation Project

Please find the following changes to the specifications for the Roof Renovation Project at Monroe High School.

Approved Substitution requests:

- Modified Bitumen
 - Soprema Elastophene Sanded 2.2 – Base Ply
 - Elastophene LS FR GR – Cap Sheet

Specifications:

- Section 01 23 00 Alternates
 - 1.3 Summary
 - F. Owner reserves the right to accept or reject any Bid Alternate.

Remove the following from this section:

The Owner may, at its option, exercise alternate(s) no later than insert date, add by Change Order(s) to the Work to be performed under the Contract Documents, the Work contemplated by the Alternates, any of them, or any combination of them, at the Alternate pricing as listed on the Bid Form – Section 00 41 00.

- Section 00 21 13 Instructions to Bidders
 - 1.2 Bid Form
 - Add the following to this section:
 - B. To be considered, both Base Bid Options pricing must be submitted.
- All Substitution Requests must be submitted by 1:00 p.m., January 11th.

This change should be considered in assembling your proposal.

Please let me know if you have any comments or questions.

Regards,

Chris Tucker

Chris Tucker | Project Manager

chris@wolftrailengineering.com | 704-562-0791

cc- All Attendees

Attachments: N/A



January 15, 2024

Mr. Maurice Brown
Construction Project Manager
UCPS Facilities Department
201 Venus Street
Monroe, NC 28112

Re: Addendum #3 – Monroe High School Roof Renovation Project

Please find the following changes to the specifications for the Roof Renovation Project at Monroe High School.

- Sheet DP02- Scale has been adjusted to reflect correct drawing scale of 1/8" per ft.
- 00 41 13 Bid Form - Revised Bid Form to reflect Addendum #3 acknowledgement.

This change should be considered in assembling your proposal.

Please let me know if you have any comments or questions.

Regards,

Chris Tucker

Chris Tucker | Project Manager
chris@wolftrailengineering.com | 704-562-0791

cc- All Attendees

Attachments: Sheet DP02
00 41 13 Bid Form

Attach to Bid Attach to Bid

00 41 13

BID FORM STIPULATED SUM (SINGLE-PRIME CONTRACT)

PROJECT: 2023-UCPS-R-3-Monroe High School Roof Renovation Project

LOCATION: 1 High School Dr, Monroe, NC 28112

SPECIFICATION DATE: October 2023

CONTRACTOR: _____

ADDRESS: _____

(Telephone w/Area Code) _____

DATE: _____

LICENSE/LIMITS: _____

NC LICENSE NUMBER: _____

INSURANCE CARRIER: _____

PRICE FOR WORK INCLUDED IN THE BID DOCUMENTS AND AS
OUTLINED IN THE SCOPE OF WORK:

BASE BID OF ROOF AREAS: (01.26 Section B, 02.02, 02.03, 02.07, 02.08, 02.09, +
contingency)

BASE BID Option #1: (PVC Re-cover) \$ _____

BASE BID Option #2: (Modified Bitumen Re-cover) \$ _____

Having visited the site of proposed Work and checked all dimensions of areas included in the
Scope of Work, our composite Lump Sum includes approximately.

AREA OF BASE BID: _____ square feet

TIME TO COMPLETION IN CALENDAR DAYS BASE BID _____

Time to completion may be considered in the award of the Contract.

We understand the requirements of the Specifications and Drawings for the project.

We acknowledge receipt of the following addenda to the Specifications (if none received, so
state):

Prebid Meeting Minutes: _____

Addendum #1: _____

Addendum #2: _____

Addendum #3: _____



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704-282-0826

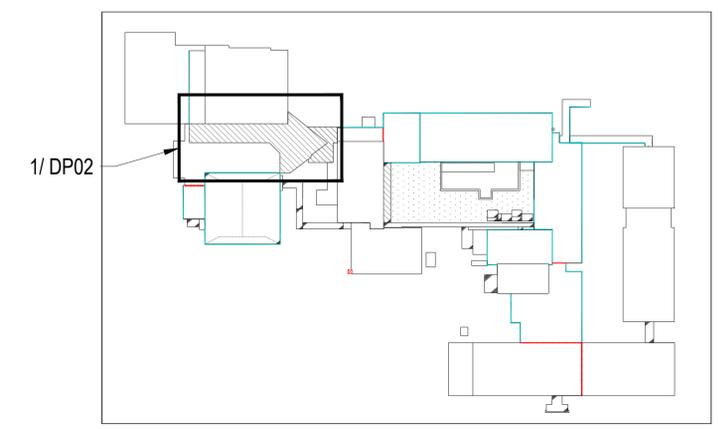


SEAL

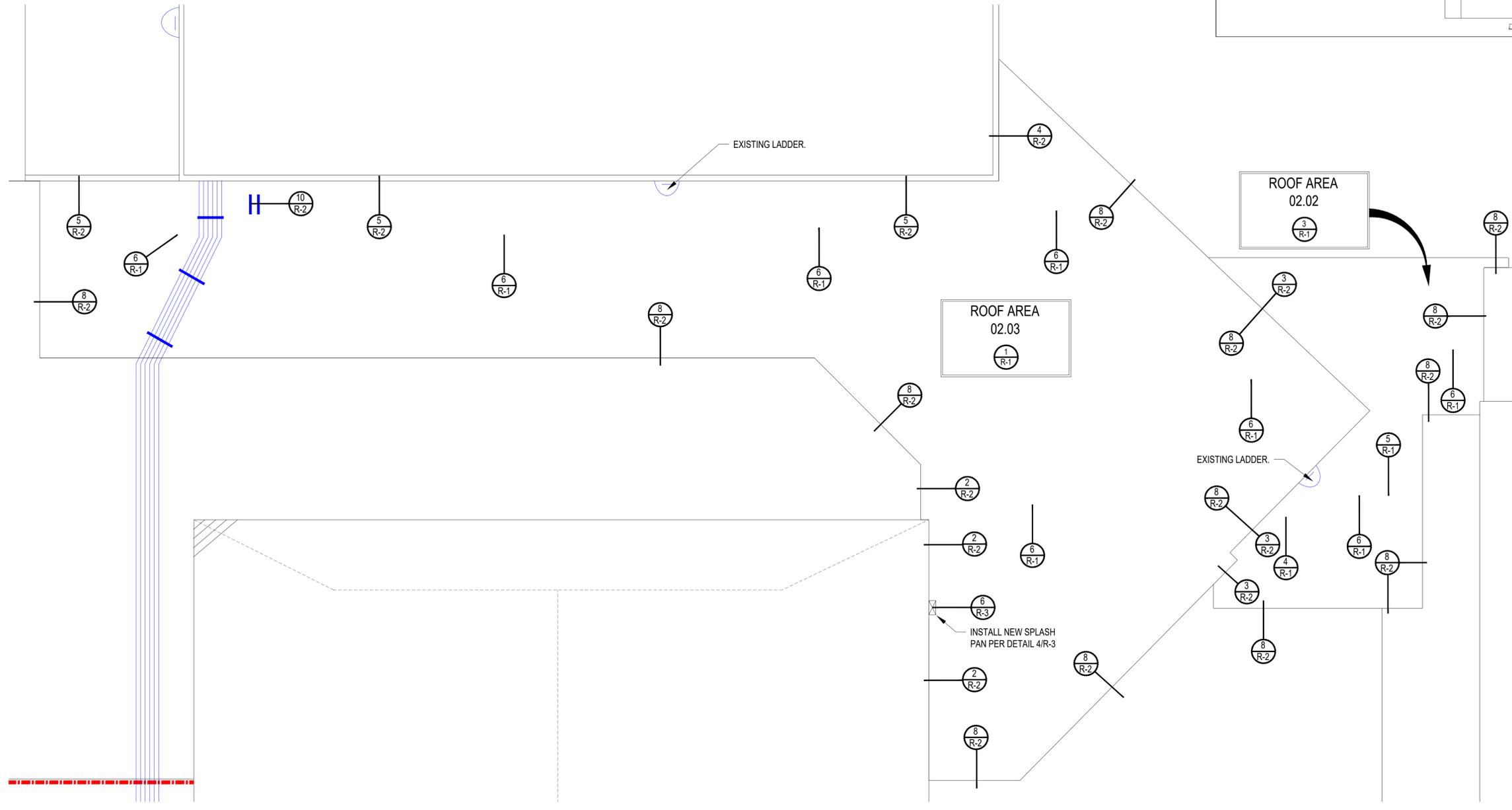
UNION COUNTY
PUBLIC SCHOOLS
400 N. CHURCH ST.
MONROE, NC 28112

OWNER

**2023-UCPS-R-3-MONROE HIGH SCHOOL
ROOF RENOVATION PROJECT**
1 HIGH SCHOOL DR.
MONROE, NC, 28112



KEY PLAN



1 DETAIL PLAN
DP02 SCALE: 1/8" = 1'

MARK	DATE	DESCRIPTION
	1-15-2024	SCALE CORRECTION

CAD DWG FILE:
DRAWN BY: CT
CHK'D BY:
DATE: 9-5-23
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DETAIL PLAN

SHEET TITLE

DP02

PAGE NUMBER

FOR CONSTRUCTION